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Cities and Towns: The Control of Natural Resources in Early States, China

by

Li Liu and Xingcan Chen

I. Introduction

The emergence of the early state in China is marked by the development of a large urban center, Erlitou (300 ha; the type site of the Erlitou culture), in the Yi-Luo River valley, western Henan.[1] The Erlitou culture (1900–1500 B.C.) is further divided into four phases, and most of it is both temporally and spatially coincident with the Xia dynasty (c. twenty-first—sixteenth century B.C.), as traditionally dated. The Erlitou site, therefore, is usually regarded as a capital city of the late Xia dynasty.

The glory of this first Chinese city came to an end in the Erlitou Phase IV, when a walled enclosure (80 ha; known as the Yanshi small city, Xiaocheng) was constructed 6 km. northeast of Erlitou. This change is generally believed to relate to the political transition from the Xia to the Shang dynasty, and the enclosure at Yanshi may have been the earliest Shang capital built after the conquest,[2] or a special garrison established by the Shang for preventing a rebirth of the Erlitou state. During the late part of the Early Shang period (the Erligang phase), a series of walled cities and towns were constructed: the Yanshi small city was enlarged into a big walled enclosure, known to archaeologists as the Yanshi Shang city (200 ha); an even larger city was erected at Zhengzhou (300 ha for the rammed-earth enclosure, and 2500 ha for the entire site), which perhaps replaced Yanshi as the capital; small walled

[1] Institute of Archaeology, *Yanshi Erlitou* (Beijing: Zhongguo da baike quanshu Press, 1999); Erlitou Working Team, Institute of Archaeology CASS, "Erlitou yizhi tianye gongzuo de xinjinzhan (New progress in the fieldwork at the Erlitou site)," *Zhongguo Shehui Kexueyuan Gudai Wenming Yanjiu Zhongxin Tongxun* 1 (2001): 32–34. In this paper, a state is defined, following Marcus and Feinman ("Introduction," in Gary Feinman and Joyce Marcus, eds., *Archaic States* [Santa Fe: School of American Research Press, 1998], 4), as a society "with (minimally) two class...strata (a professional ruling class and a commoner class) and a government that was both highly centralized and internally specialized." The Erlitou culture (at least a part of it) represents the first social entity that meets these two criteria. It was characterized by a centralized and internally specialized government, indicated by a great concentration of palatial foundations and various craft production workshops in an urban center (Erlitou), and rapid cultural expansion over a large region. The second criterion, marked social stratification, is indicated by burial differentiation.

[2] Du Jinpeng et al., "Shilun Yanshi Shangcheng xiaocheng de jige wenti (Regarding some issues related to the small city inside the Yanshi Shang city)," *Kaogu* 1998.2: 35–40; Gao Wei et al., "Yanshi Shangcheng yu Xia Shang wenhua fenjie (The Yanshi Shang city and the demarcation between the Xia and Shang cultures)," *Kaogu* 1998.10: 66–79; Zhao Zhiquan, "Erlitou wenhua yu Erligang wenhua (The Erlitou culture and Erligang culture)." In The editorial committee, ed., *Qingzhu Su Bingqi kaogu wushiwu nian lunwenji* (Beijing: Wenwu Press, 1989) 273–79.

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towns were constructed, among which were Yuanqu (13 ha) and Dongxiafeng (13 ha), both in southern Shanxi, and Panlongcheng (7.5 ha) in Hubei. These five walled cities/towns, however, were abandoned one after another during the Upper Erligang phase. The abandonment of these cities/towns was followed by a period of political instability, indicated by the emergence of multiple regional centers, including Xiaoshuangqiao near Zhengzhou,[3] Caoyanzhuang in Xingtai, Hebei,[4] and Huanbei in

Figure 1. Major sites and locations mentioned in the text. 1. Erlitou in Henan; 2. Yanshi in Henan; 3. Yuanqu in Shanxi; 4. Dongxiafeng in Shanxi; 5. Zhengzhou in Henan; 6. Xiaoshuangqiao in Henan; 7. Anyang in Henan; 8. Xingtai in Hebei; 9. Lijin in Shandong; 10. Daxinzhuang in Shandong; 11. Panlongcheng in Hubei; 12. Tonglushan in Hubei; 13. Tongling in Jiangxi.

[3] Henan Provincial Institute of Cultural Relics, "Zhengzhou Xiaoshuangqiao yizhi de diaocha yu shijue (Survey and trial excavation of the Xiaoshuangqiao site in Zhengzhou)." In Henan Provincial Institute of Cultural Relics, ed. *Zhengzhou Shangcheng kaogu xinfaxian yu yanjiu* (Zhengzhou: Zhongzhou Guji, 1993), 242–71.

[4] Zou Heng, *Xia Shang Zhou kaogu lunwenji*, (Beijing: Wenwu Press, 1980), 207.

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Table 1. Chronology of the major sites mentioned in the text

Dynasties	Estimated Dates BC*	Archaeological phase	Erlitou Henan	Yanshi Henan	Yuanqu S. Shanxi	Dongxiafeng S. Shanxi	Zhengzhou Henan	Anyang Henan	Panlongcheng Hubei	Tonglushan Hubei	Tongling Jiangxi	North Shandong
Late Shang	1250 -1046	Yinxu						X ♦ ▽	X ■ (Phase I)	X ♦	X ♦	X
Middle Shang	1450-1250	Transitional period						X ■ ▽ Huayuanzhuang	X ■♦		X ♦	X
		Late Upper Erligang	X	X ■		X ■	X ♦ ▽ (?) Xiaoshuangqiao		X ■♦		X ♦	X
Early Shang	1500-1450	Early Upper Erligang	X	X■	X ■♦	X ■	X ■ ♦ ▽		X ■♦			
		Lower Erligang	X	X ■	X ■♦	X ■♦	X ■ ♦ ▽		X♦			
	1600-1500	Erlitou IV	⊗♦	⊗ X ■ ♦ ▽	⊗♦	⊗♦			⊗♦			
Xia (?)	1900-1600	Erlitou III	⊗♦ ▽		⊗♦	⊗♦			⊗♦			
		Erlitou II	⊗♦ ▽			⊗						
		Erlitou I	⊗									

⊗ Presence of the Erlitou culture. X Presence of the Shang culture. ■ Presence of walled enclosure.
♦ Presence of bronze metallurgy (mining, smelting, or casting). ▽ Location of primary center or capital.

* Dates are based on Qiu Shihua et al, "Youguan suowei 'Xia wenhua' de tan shisi niandai ceding de chubu baogao," *Kaogu* 1983.10: 923–28; Tang Jigen et al, "The largest walled Shang City," and Xia Shang Zhou Chronology Project Team, ed. *Xia Shang Zhou duandai gongcheng 1996-2000 nian jieduan chengguo baogao*. Beijing: Shijie tushu, 2000.

Anyang.[5] This phenomenon suggests either the relocation of capitals to new sites[6] or a decentralized political scenario. The capital was finally established at Yinxu (not walled, 2000 ha), near Anyang in northern Henan[7] (Figure 1; Table 1).

The cultural affiliation of the Erlitou site (as either the Shang capital or the Xia capital) has been a matter of debate for several decades, and no consensus has been reached among Chinese archaeologists. In recent years the majority of Chinese scholars have come to an agreement that the Erlitou site, or most of the occupational period of the site, belongs to the Xia dynasty.[8] However, no hard evidence has been presented to link the Erlitou with Xia. In this article, therefore, we use the term "Erlitou polity" to refer to the earliest state developed in the Central Plains centered at the Erlitou site, and designate "early Shang" to the Erligang culture, which coincides in time and space with the early phase of the Shang dynasty as traditionally believed.

Similarly, there is no consensus among Chinese archaeologists on either the chronology or periodization of the Erlitou and Shang cultures, or which city was the first Shang capital (Yanshi or Zhengzhou). In this article we follow Gao et al.,[9] representing the opinion of excavators of the Yanshi Shang city, regarding the relationship between Yanshi and Zhengzhou. Table 1 thus provides only a rough chronology and periodization, which are by no means to be taken as authoritative, but are made for the convenience of the discussion here.

The rise and fall of these political centers were not isolated occurrences, but

5 Institute of Archaeology, "Henan Anyangshi Huanhe bei Huayuanzhuang yizhi 1997 nian fajue jianbao (Preliminary report of the excavation at the Huayuanzhuang site in Huanbei, Anyang city, Henan)," *Kaogu* 1998.10: 23–35; Institute of Archaeology et al., "Huanhe liuyu quyu kaogu yanjiu chubu baogao (Preliminary report on regional archaeological research in the Huan River valley)," *Kaogu* 1998.10: 13–22; Tang et al., "The largest walled Shang City located in Anyang, China," *Antiquity* 74 (2000): 479–80.

6 Tang Jigen. "Zhong Shang wenhua yanjiu (Study of the Middle Shang culture)," *Kaogu xuebao* 1999.4: 393–420.

7 Li Chi, *Anyang* (Seattle: University of Washington Press, 1977).

8 Gao Wei et al., "Yanshi Shangcheng yu Xia Shang wenhua fenjie (The Yanshi Shang city and the demarcation between the Xia and Shang cultures)," *Kaogu* 1998.10: 66–79.

9 Gao Wei, op. cit.

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involved large-scale demographic changes relating to the populations residing inside the cities/towns and settlements in the surrounding areas. The underlying dynamics of these changes in settlement system are important factors relevant to the processes of early state formation in China.

This article focuses on political and economic activities of two walled towns—Dongxiafeng and Yuanqu—in southern Shanxi, from the perspective of a center-periphery system of interaction in early states. Special attention is paid to the control and flow of vital natural resources on an interregional level. The discussion is conducted from several aspects, including regional settlement patterns, demographic variations, internal structure of the cities/towns, distribution of features and artifacts associated with craft specialization, and the locations of natural deposits of copper and salt in relation to the settlement distribution of the Xia and Early Shang. We argue in this study that the change in settlement patterns, especially the rise and fall of cities and towns, needs to be understood from the perspective of the political-economic system. The changing patterns of demography and urbanization were affected by changing strategies in the procurement of vital resources from peripheral regions by the political centers in the core areas during the early dynastic period in China.

II. The Centers: Erlitou, Yanshi, and Zhengzhou cities

The three early cities at Erlitou, Yanshi and Zhengzhou seem to share some similar elements in city planning. Temple/palatial structures and craft workshops for making bronze, bone, and ceramic objects constitute major components of urban areas.[10] These early cities were apparently political, ritual, and economic centers of the region, with a great concentration of population engaged in craft production of various types.

It is especially notable that bronze metallurgy was one of the most significant state industries in early Chinese civilizations. Among bronze products, ritual vessels are the most prominent. These were used as sacrificial offerings by the elites for ancestral worship rituals. The development of state-controlled bronze metallurgy and other types of craft production greatly contributed to the growth of urban centers. This raises a long-standing question: where did early states obtain metals to sustain such massive bronze production? The locations of copper sources have been suggested either in northern China,[11] or in southern China.[12]

Geographically, the Yiluo plain, where the two earliest cities (Erlitou and Yanshi Shang city) are situated, is a vast fertile alluvial basin. It is surrounded by the Yellow

[10] For Erlitou, see Robert Thorp, "Erlitou and the search for the Xia." *Early China* 16 (1991): 1–38; for Yanshi, see Wang Xuerong, "Yanshi Shangcheng buju de tansuo he sikao (Inquiry into the plan of Yanshi Shang city)," *Kaogu* 1999.2: 24–34; for Zhengzhou, see Pei Mingxiang, "Zhengzhou Shangdai wangcheng de buju jiqi wenhua neihan (Plan and cultural contents of Shang capital city at Zhengzhou)," in Henan Provincial Institute of Cultural Relics, ed., *Zhengzhou Shangcheng kaogu xinfaxian yu yanjiu* (Zhengzhou: Zhongzhou Guji, 1993), 7–14.

[11] See, e.g., Shih Chang-ju, "Yindai de zhutong gongyi (Bronze manufacture in the Yin dynasty)," *Bulletin of the Institute of History and Philology, Academia Sinica* 26 (1955): 95–129; K.C. Chang, *The Archaeology of Ancient China* (New Haven: Yale University Press, 1986), 367.

[12] Liu Shizhong. "Zhongguo zaoqi tongkuang chubu yanjiu (Preliminary research on early copper mines in China)," in *Zhongguo kaogu xuehui di ba ci nianhui lunwenji* (Beijing: Wenwu Press, 1991), 197–207; Liu Shizhong et al., "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu (Excavation and study of the copper mining site at Tongling, Jiangxi)," *Kaogu xuebao* 1998.4: 490–94.

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River to the north and mountain ranges on the other three sides. Such an environmentally circumscribed region may have been chosen as site of the primary center by the Erlitou due to its military defensibility and agricultural potential. The Early Shang city at Yanshi was apparently established for conquest and control of the defeated population at Erlitou. For the later part of the Early Shang period, the capital at Zhengzhou is situated in the north of the Huang-Huai plain, which is also fertile and suitable for agricultural production.

These alluvial plains, however, lack raw material resources—such as copper, tin/lead, and salt—which are crucial for bronze casting and for supporting large populations in the capital cities. These resources are available in mountainous regions within a radial distance of more than 200 km from Erlitou and Yanshi, or 300 km from Zhengzhou. Notably, these resources occur in especially high concentration in the southern Shanxi region,[13] which is the northwestern peripheral area of the Erlitou and Early Shang cultural distributions (Figures 2, 3). It is in this region that two walled Shang towns, Dongxiafeng and Yuanqu, were located.

In order to ensure the supply of these natural resources, early state rulers appear to

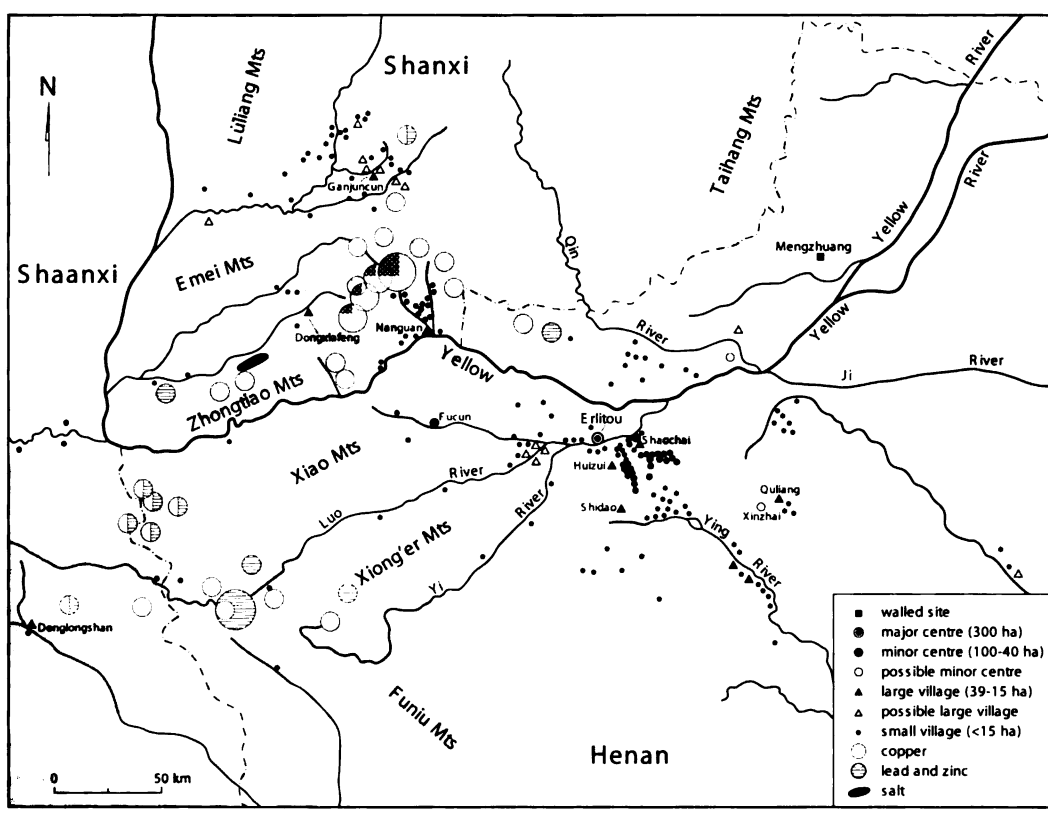

Figure 2. Distribution of important natural resources (copper, lead, and salt; after Huanghe River Valley Atlas, 116–122) and settlement patterns of the Erlitou culture in the middle Yellow River Valley. Noting that the dense distribution of sites east to Erlitou in the Yiluo region is based on a full-coverage survey project (Liu et al. in press), while other areas are based on traditional archaeological surveys.

[13] Hydraulic Ministry, *Huanghe River Valley Atlas* (Shanghai: Chinese Map Press, 1987), 116–22.

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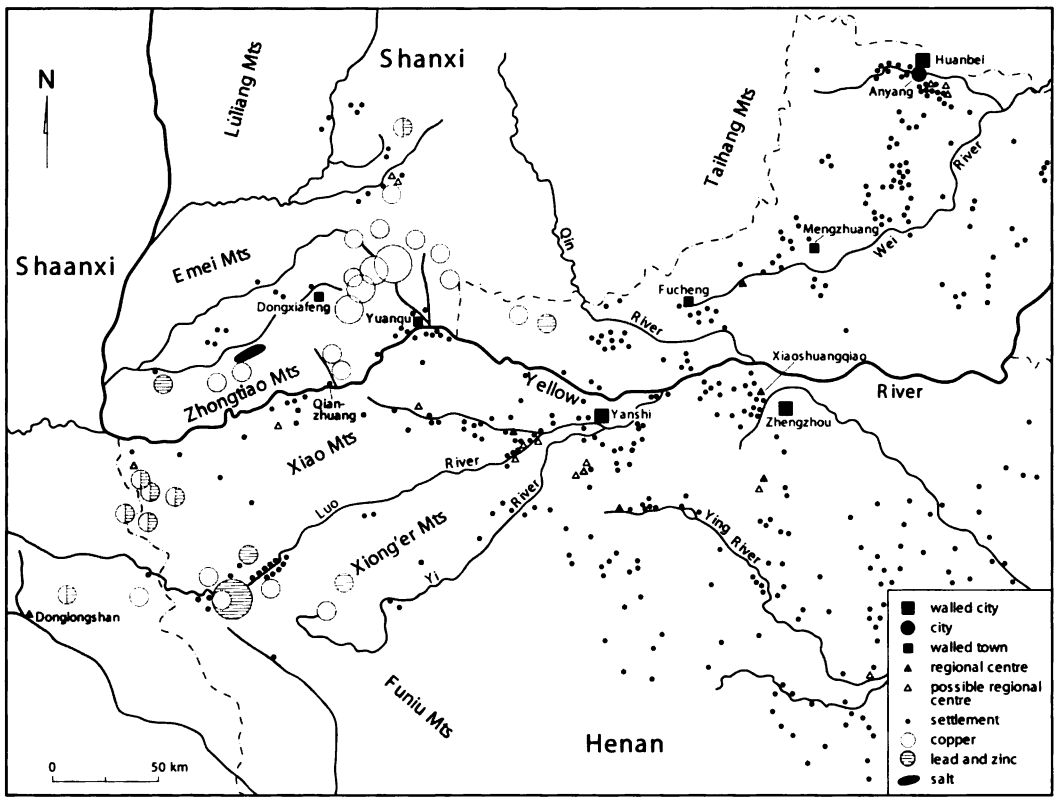

Figure 3. Distribution of important natural resources (copper, lead, and salt; after Huanghe River Valley Atlas, 116–122) and settlement patterns of the Shang culture in the middle Yellow River Valley (note: the Shang sites marked on the map are not all contemporary, and the two small walled towns in northern Henan–Mengzhuang and Fucheng–are not discussed here).

have extended their political and military power to these peripheral regions in order to obtain the resources directly. The establishment of walled towns in the resource-rich regions in southern Shanxi may have been related to the formation of regional networks, which were controlled by the states to procure the raw materials to serve the needs in the capital cities. This proposition can be examined by analyzing the settlement patterns and development of two regional centers, Dongxiafeng and Yuanqu.

III. The periphery: Southern Shanxi

The southern Shanxi region is composed of three basins, Yuncheng, Yuanqu, and Linfen, all surrounded by mountains, the Zhongtiao, Emei, Lüliang, and Taiyue Mountains. Possessing a wide range of geographic features—mountains, alluvial plains, river systems, and lakes—this region is environmentally rich not only for its fertile soil in the alluvial areas, but also for various natural resources available in both lowlands and highlands. Abundant copper deposits and a few lead deposits are distributed in the mountains. According to modern geological investigation, Shanxi's copper resources are the fifth largest among Chinese provinces. The quantity of

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copper deposits there is about one million tons, and most of the copper deposits are distributed in southern Shanxi, especially in the Zhongtiao range.[14] Preliminary investigations of ancient copper mining sites in the Zhongtiao range have revealed many ancient underground mining shafts and tunnels. The scale of ancient mining activities was enormous. Modern mining companies have often encountered ancient mining tunnels where copper deposits were already emptied. One of three mining shafts investigated was dated to the Eastern Zhou period, but it is possible that mining started at a much earlier date.[15] In September 1999, the authors also visited an ancient mine dated to the Tang dynasty at Tongmugou in Yuanqu. The main tunnel was more than a hundred meters long.

The Hedong Salt Lake, the only salt resource available in the entire middle Yellow River region, is located in the Yuncheng basin (figure 2). The salt deposits are very rich, and in antiquity, the salt was produced from the brine by drying in the sun (figure 4).[16] Salt and the salt-making processes in the Hedong Salt Lake were recorded in many ancient texts.

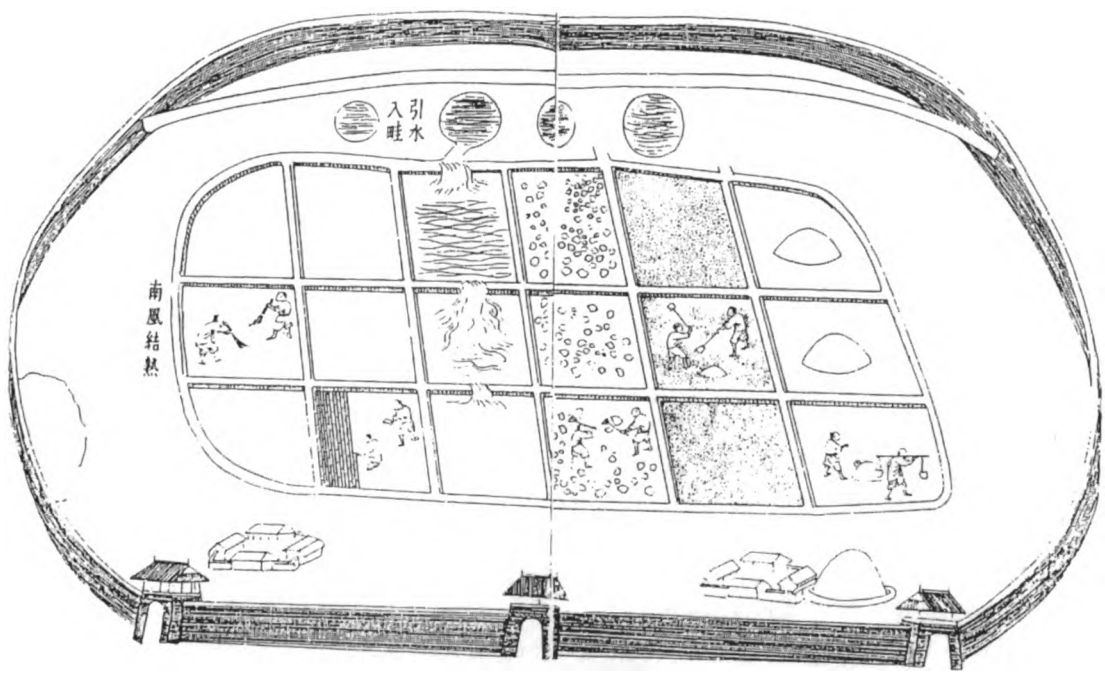

Figure 4. The salt-making process depicted in *Tiangong kaiwu*, originally printed in A.D. 1637. The brine was channeled into an artificially made paddy field near the salt lake in the spring and dried to salt crystals by the summer wind. The salt was then collected from the paddy field and carried to storage facilities (see fig. 8) (after Song 1997[1637]: 167, 176–177).

[14] Topographic Bureau of Shanxi Province, *Shanxi sheng dituce* (Taiyuan: Shanxi Ditu, 1987), 132, 205.

[15] Li Yanxiang, "Zhongtiaoshan gu tongkuangye yizhi chubu kaocha yanjiu (Preliminary investigation and research of ancient copper mining sites in the Zhongtiao Mountains)," *Wenwu jikan* 2 (1993).

[16] Sima Qian (145-c.85 BC), ed., "Huozhi liezhuan (Biographies of entrepreneurs)" in *Shiji* (Historical Memoirs), (Taipei: Taishun Press, 1976), 3295–360; Sung Ying-hsing, *T'ien-kung k'ai-wu: Chinese Technology in the Seventeenth Century* (University Park and London: Pennsylvania State University Press, 1966), 115–16; Chai Jiguang, *Yuncheng yanchi yanjiu* (Taiyuan: Shanxi Renmin Press, 1991),18–30.

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Salt was referred to as *lu* in the Shang oracle-bone inscriptions[17] and Zhou bronze inscriptions.[18] According to *Zhouli* (*Rites of the Zhou*; probably written during the Eastern Zhou; 5th–3rd century B.C.), in the Western Zhou state officials–*yanren* (salt personnel) were responsible for the use of salt. Several later commentaries on this reference compiled in *Zhouli Zhengyi* by Sun Yirang (1848–1908) pointed out that salt was used as ritual offerings, especially the salt from the Hedong Salt Lake.[19] According to *Guanzi*, edited by Liu Xiang (79–8 B.C.), it is possible that the Qi state in the Eastern Zhou period had attempted to monopolize salt distribution and trade in the sixth century B.C.; and salt has been an important source of state tax revenue throughout Chinese history.[20] In the Jin dynasty (A.D. 1127–1279), for example, the fluctuation of the price of salt directly affected the state budget, and salt produced from southern Shanxi made up 1/7 of the tax revenue from salt in the entire country.[21] It is possible that the salt resource in the Hedong Salt Lake was utilized long before the historically documented use during the Zhou dynasty.

Two passages of bronze inscriptions also provide crucial information about the significance of salt from the Hedong Salt Lake. According to Li Xueqin, a passage on one of the seven bells known as the *Rongsheng bianzhong* bell-set mentions that Rongsheng, who made the bells, transported salt to Fantang in order to exchange for copper, and the bell-set was made to commemorate this event.[22] The bell set was probably looted from the royal cemetery of the Jin State in Houma, southern Shanxi. Therefore, the salt must have come from the Hedong Salt Lake. Another piece of information is from bronze inscriptions on the *Jin Jiang ding* tripod. Based on Li Xueqin, the inscriptions mention that the Jin State sent one thousand vehicles carrying salt to Fantang to exchange for copper. These two passages may have referred to the same event, which happened in 740 B.C. of the Eastern Zhou period; hence the bronze bells and tripod may have been made in that same year.[23] Although other scholars have different interpretations regarding the dates for making these bronze objects and nature of the events mentioned in the inscriptions,[24] they all agree that Fantang was an important locale on the copper/tin transportation routes. Fantang was located in Fanyang, Xincai county, southeastern Henan. Li Xueqin (1999) and Ma Chengyuan (1999) further suggest that it was a redistribution center where copper and tin ingots were brought in from mining sites in the Yangzi River valley in ancient times.[25]

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17 Yang Shengnan, *Shangdai jingjishi* (Guiyang: Guizhou Renmin Press, 1992), 634.

18 Guo Zhengzhong, *Zhongguo yanye shi: Gudai bian*. Beijing: Renmin Press, 1997.

19 Sun Yirang, ed., *Zhouli Zhengyi* (Beijing: Zhonghua Shuju Press, 1987), 411–12.

20 Guo Zhengzhong, "Guanyu Songdai 'Yuanquxian dianxiayang' de jidian kaoshi."

21 Zhao Kangmin et al., "Guanyu Shaanxi Lintong chutu de jindai shuiyin de jige wenti (Some issues on the taxed silver of the Jin dynasty unearthed from Lintong, Shaanxi)," *Wenwu* 1975.8.

22 Li Xueqin, "Rongsheng bianzhong lunshi (Interpretation of the Rongsheng bell set)," *Wenwu* 1999.9: 75–82.

23 Li Xueqin, "Rongsheng bianzhong lunshi."

24 See, e.g., Ma Chengyuan, "Rongsheng bianzhong mingwen tantao (On the inscriptions of the Rongsheng bell set)." In *Baoli cangjin* (Guangzhou: Lingnan Meishu Press, 1999), 361–64; Qiu Xigui, "Rongsheng bianzhong mingwen kaoshi (Interpreting the inscriptions on the Rongsheng bell set)," in *Baoli cangjin*, 365–74.

25 Li Xueqin, op. cit.; Ma Chengyuan, op. cit.

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It would be useful to estimate the total quantity of salt transported by the 1000 vehicles in order to understand the scale of the Hedong salt production. The earliest ethnohistoric documents with illustrated details about traditional methods of salt production and transportation in the Hedong Salt Lake are from the Song dynasty (A.D. 960–1127). The Hedong salt was traditionally packaged with bags made of reed mats. In the Song dynasty, the standard weight was 58.25 kg for a small bag of salt, 110 kg for a large bag.[26] The carrying capacity of the vehicles mentioned in the inscriptions on the *Jin Jiang ding* tripod is unknown; if we estimate 100 kg per vehicle as its lower range, these one-thousand vehicles would have transported about 100,000 kg of salt. If the average daily salt consumption was 5 g per person,[27] 100,000 kg of salt could supply 54,800 people for a year. Such a large amount of salt involved in a single transaction seems to indicate a state-level control of salt production and distribution, in the early Eastern Zhou period in southern Shanxi, at the latest.

More than 300 sites, dating from Paleolithic to historic periods, have been found in southern Shanxi through archaeological survey. During the late Longshan period (2600–2000 B.C.) of the late Neolithic, highly stratified social systems developed here, with three tiers of settlement hierarchy. The largest regional center (300 ha) was located at Taosi in the Linfen basin.[28] These complex societies, however, did not evolve into a state-level social organization with their characteristically specialized internal political dynamics. In the succeeding Erlitou period (c.1900–1500 B.C.), the early state developed in western Henan, with a four-tier settlement hierarchy centered on the Erlitou site.[29] Southern Shanxi was then occupied by settlements belonging to the Dongxiafeng variant of the Erlitou culture. This new cultural assemblage was a combination of material traditions (including ceramic and stone tool assemblages, residential architecture, expressions of mortuary practice, a form of storage pit, and the use of oracle bones) from local and neighboring regions with a predominance of elements from the Erlitou culture in western Henan.[30]

Because in southern Shanxi the local Longshan cultural assemblages are discontinuous with the Dongxiafeng variant, while a strong association in material culture exists between the Erlitou culture in Western Henan and the Dongxiafeng variant, it has been suggested that the change of archaeological culture in southern Shanxi may have been, to some extent, the result of population intrusion from Western Henan. The occurrence of the Dongxiafeng variant of the Erlitou culture in southern Shanxi may have been related to a combination of social changes. These may have involved

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[26] Guo Zhengzhong, *Zhongguo yanye shi*, 268.

[27] Daniel Potts, "On salt and salt gathering in ancient Mesopotamia," *Journal of the Economic and Social History of the Orient* XXVII (1984): 229.

[28] Institute of Archaeology, "Jinnan kaogu diaocha baogao (Report of archaeological surveys in southern Shanxi)," in *Kaoguxue jikan* 6 (1989): 1–51; Liu Li, "Settlement patterns, chiefdom variability, and development of early states in northern China," *Journal of Anthropological Archaeology* 15.3 (1996): 237–88.

[29] Liu Li, "The development and decline of social complexity in China: Some environmental and social factors," *Indo-Pacific Prehistory Association Bulletin (The Melaka Papers)* 20.4 (2000): 14–33.

[30] Ji Kunzhang, "Jinnan Longshan qi wenhua tong Dongxiafeng leixing de guanxi (Relationship between the Longshan culture in southern Shanxi and the Dongxiafeng type)," *Zhongyuan wenwu* 1995.2: 6; Li Weiming, "Zaiyi Dongxiafeng leixing (Additional discussion on the Dongxiafeng phase)," *Zhongyuan wenwu* 1997.2: 23–31.

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the expansion of the Erlitou population[31] and the acculturation of indigenous people in an exchange or tributary relation to Erlitou.

The distribution of Erlitou culture sites in southern Shanxi[32] suggests the existence of one regional center in each basin, each surrounded by a number of small villages. These centers are no larger than 25 ha in area, forming a two-tier settlement hierarchy with the villages (Figure 2). The similarity in material culture between southern Shanxi and western Henan indicates close contacts between the two regions. The settlement clusters in southern Shanxi appear to have been subordinate to the primary center at Erlitou.

In southern Shanxi the Erlitou culture was followed by the Erligang phase of the Shang culture (Table 1). The Shang cultural assemblages in this region show little connection with the previous Erlitou culture, but share a high degree of similarity with those found in the Shang capital city at Zhengzhou.[33] The change of the material culture in this region, again, may have been the result of the population expansion from the core area of the state.

The apparently similar patterns of population movement during the Erlitou and Erligang periods raise an interesting question. Why did Erlitou and early Shang both expand their population to southern Shanxi? Settlement patterns and the development of regional centers in the three basins shed light on the dynamics of such population expansion in the early states.

III.1. The Yuncheng basin and the Dongxiafeng site

The Yuncheng basin in southern Shanxi is a tightly circumscribed region, bounded by the Zhongtiao mountain range to the east and south, the Ermei mountain range to the north, and the Yellow River to the west. Rich copper and lead deposits are distributed in the Zhongtiao mountain range.[34] Several lakes, including the Hedong Salt Lake (*Hedong Yanchi*), are distributed in the southeastern part of the basin.[35] Seven Erlitou sites and 11 Erligang sites have been found in the basin[36] (Figures 2, 3). During both periods, the Dongxiafeng site (25 ha for the Erlitou and 13 ha for the early Shang) was the regional center based on its relatively large size and rich material remains.[37]

Dongxiafeng is located on both sides of the Qinglong River, a sub-tributary of the Yellow River in the Yuncheng basin.[38] The cultural deposits are divided into six

[31] Li Weiming, "Zaiyi Dongxiafeng leixing;" Yang Guijin. "Qinshui xiayou de Xia wenhua yu xian Shang wenhua (The Xia culture and Proto-Shang culture in the lower Qin River valley)," *Zhongyuan wenwu* 2 (1997): 32–38, 59.

[32] Institute of Archaeology, "Jinnan kaogu diaocha baogao."

[33] Ibid.

[34] Hydraulic Ministry, *Huanghe River Valley Atlas*, 116–18; Li Yanxiang, "Zhongtiaoshan gu tongkuangye yizhi chubu kaocha yanjiu."

[35] Institute of Archaeology et al., *Xiaxian Dongxiafeng* (Beijing: Wenwu Press, 1988), 1; Hydraulic Ministry, *Huanghe River Valley Atlas*, 120–22.

[36] Institute of Archaeology, "Jinnan kaogu diaocha baogao;" Zhang Guowei. "Shanxi Wenxi guwenhua yizhi diaocha jianbao (Preliminary report on surveys of ancient sites in Wenxi, Shanxi)," *Kaogu* 1988.3: 200–17.

[37] Except for Dongxiafeng, all the other Erlitou sites are smaller than 5 ha in size, and all the other Shang sites are smaller than 7 ha (Institute of Archaeology, "Jinnan kaogu diaocha baogao").

[38] Institute of Archaeology et al., *Xiaxian Dongxiafeng*.

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phases, the first four belonging to the Dongxiafeng variant of the Erlitou culture (equivalent to the Erlitou Phases II - IV) and the last two dated to the Erligang phase of the Shang culture (Table 1). Evidence for bronze metallurgy appears from Phase III to Phase V (equivalent to Phase III of Erlitou and Lower Erligang) at the site. A total of 23 bronze objects and fragments, 35 pieces of slag, and ten stone molds for casting bronze objects have been recorded (10). It is notable that the quantity of slag is small. It is probably because that the excavated area is only a small portion of the craft production center, these pieces of slag are strays from a nearby unexcavated bronze working installation (Figure 5).

Except for one *jue* vessel found in a burial dating to the Erligang period, all the bronze objects are small tools and weapons, including chisels, knives, and arrowheads. The stone molds are also for making axes, chisels, and arrowheads (Table 2). The bronze tool types from Dongxiafeng are similar to those unearthed at the Shang copper mining site at Tongling in Jiangxi (including axe, chisel, adze, and yue axe).[39] This suggests that the Dongxiafeng bronze tools were made for mining purposes. The slag and stone molds were concentrated in two areas of the site—one in the south (Locality 5) and the other in the east (Locality 4; figure 5). These two locations also yielded 70% of the total bronze objects found at the site.

In Phase III, the southern part of the site was enclosed by two square-shaped ditches estimated 2.7 ha in area,[40] with many small cave shelters (sizes vary 3–13 sq m in area, with most of them 4–7 sq m) dug into the vertical walls of the inner ditch and on terraces inside the ditches. Each shelter was probably big enough for three persons to live, on average. This area seems to have been occupied by a dense

Table 2. Bronze objects and evidence for bronze and ceramic production from Dongxiafeng*

Dongxiafeng site phases	Phase III	Phase IV	Phase V	Phase VI
General chronology	Erlitou III	Erlitou IV	Lower Erligang	Upper Erligang
Bronze chisels	1	1		
Bronze knives		1	4	1
Bronze arrowheads	4	4	10	3
Bronze vessels				1 *jue* from burial M4
Bronze fragments	2	1		
Slag	20	10	5	
Stone molds	6 for axes	1 for chisels	3, for axes, chisels, & arrowheads	
Ceramic production	5 kilns, 2 potter's tools	5 potter's tools	3 potter's tools	2 potter's tools

* Data based on Istitute of Archaeology et al. eds., Xiaxian Pongxiafeng (Beijing: Wennu, 1998).

[39] Liu Shizhong and Lu Benshan, "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu," 482.

[40] The inner ditch is 4.9–5.6 m wide at ground level, 2.6–3.5 m wide at the bottom, 2–2.9 m deep, 120 m long on the eastern side, 127 m on the southern side, 155 m on the western side, and 140 m on the northern side. The outer ditch is 2.9–3.9 m wide at ground level, 1.8–2.7 m wide at the bottom, 150 m long on the eastern side, 148 m on the southern side, 172 m on the western side, and 198 m on the northern side.

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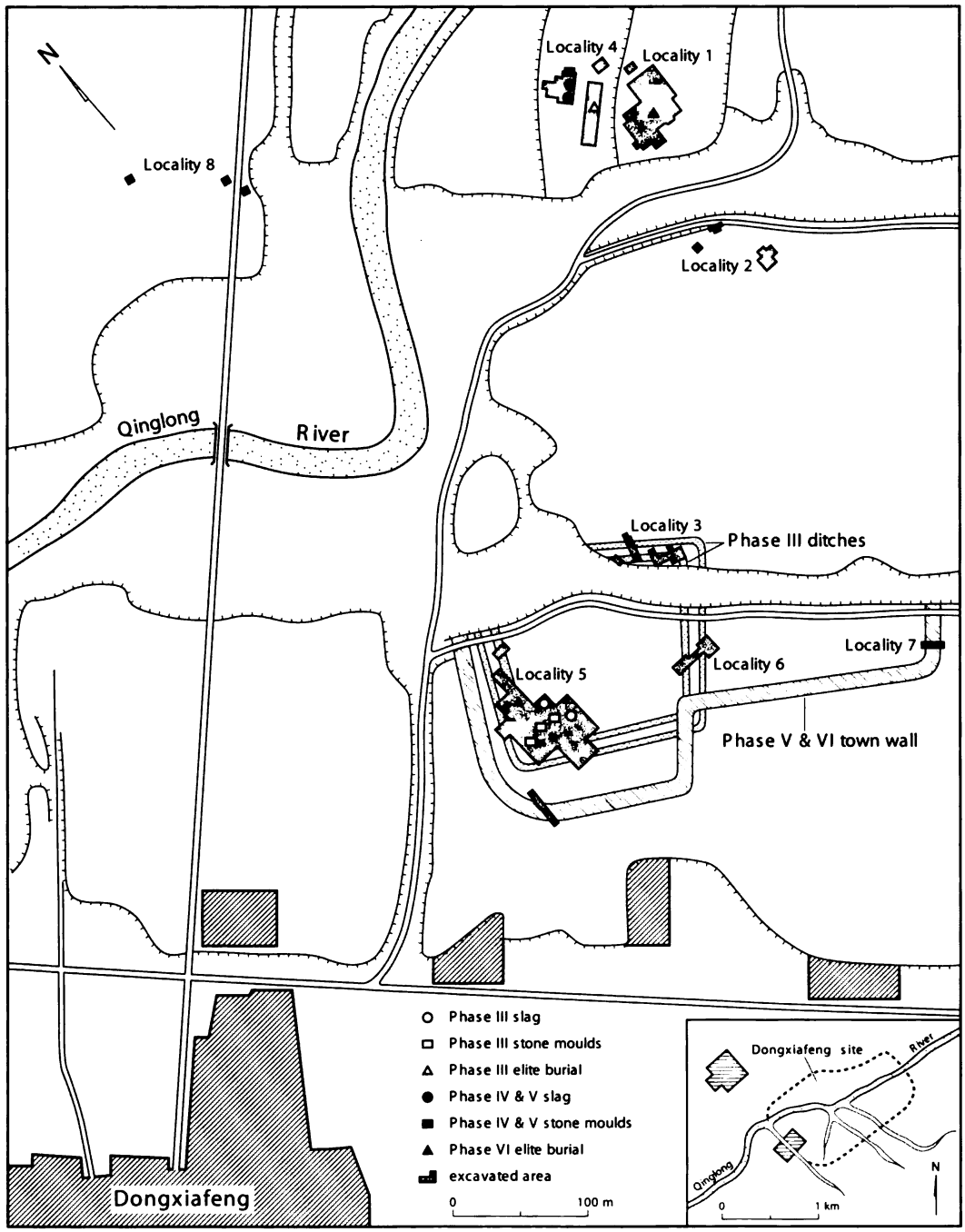

Figure 5. Map of the Dongxiafeng site, showing excavated areas and locations of artifacts relating to bronze production (Phase III = Erlitou Phase III; Phases IV–VI = Early Shang) (redrawn from Xiaxian Dongxiafeng: Figures. 2, 3).

population—a total of 37 cave shelters for human occupation, 13 small caves probably used as storage facilities or pens for domesticated animals, 21 ash pits, and four burials were all distributed within an excavated area of about 3500 sq m. The double ditches appear to have been dug intentionally in order to create vertical walls

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in which cave shelters could have been made.[41] This construction required collective labor on a large scale. The same area appears also to have been a location for craft production, as indicated by the discovery of four pottery kilns, two water wells,[42] 20 pieces of slag, six stone molds, and one semi-worked stone artifact[43] (figures 5, 6; Table 2). The southern part of the site, therefore, appears to have been a working and residential area of craftsmen.

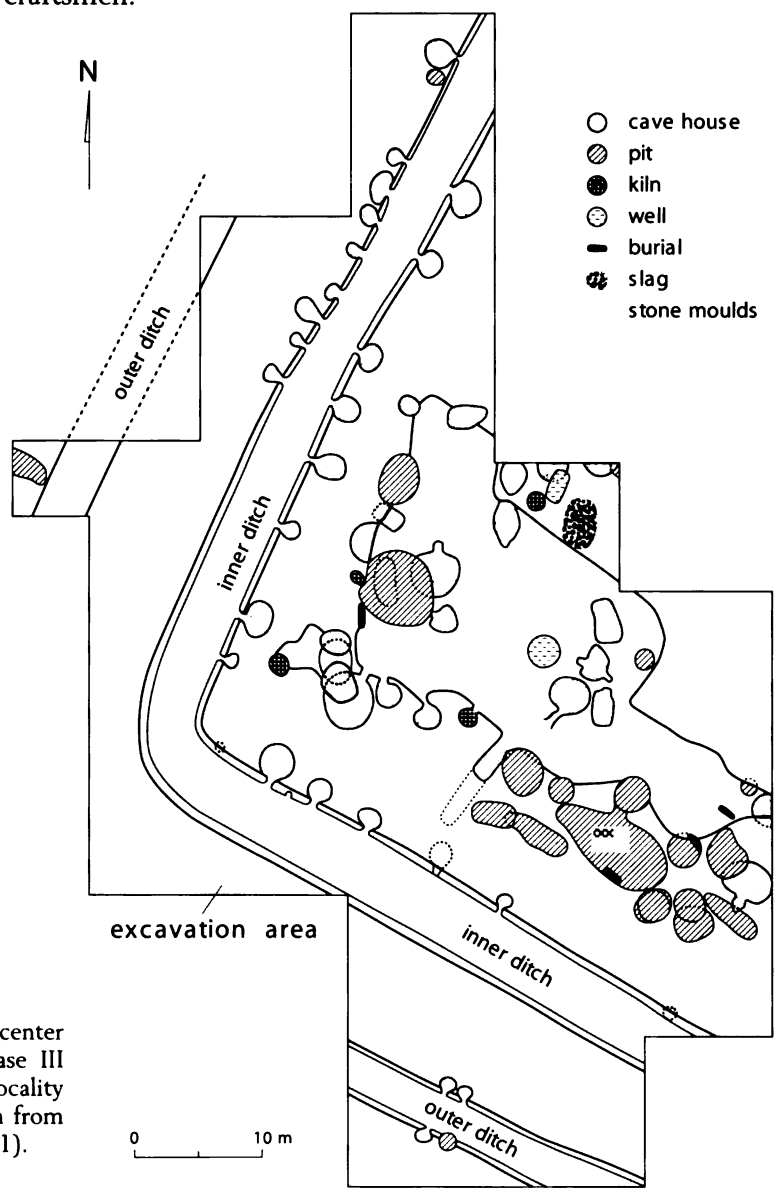

Figure 6. Craft production center dated to Dongxiafeng Phase III (Late Erlitou), found in Locality 5 at Dongxiafeng (redrawn from Xiaxian Dongxiafeng, fig. 11).

[41] This method–digging a ditch or shaft downward from the ground surface and then making cave shelters on the vertical walls–had been employed since the Longshan period in the southern Shanxi region where large areas of flat terrace on loess plateau were available for settlements (Fu Shumin, "Shanxi Longshan wenhua tuyaodong de fenqi (Periodisation of cave shelters of the Longshan culture in Shanxi)," *Shanxi daxue xuebao* 1989.1, 90–96; Hu and Zhang, "Lun yaodong" in Su Bingqi, ed., *Kaoguxue Wenhua Lunji*, III, 1993, 335–70.

[42] The two wells, about 10 m apart, were located in a close proximity to the kilns and slag. Therefore, their function may have to do with both craft production and domestic usage.

[43] Institute of Archaeology et al., *Xiaxian Dongxiafeng*, 49–99.

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This craft production area reveals a centralized and restricted layout, specialized in two types of products (pottery and metallurgy). This arrangement manifests a high level of intensification of production with easy administration, often indicating a full-time craft specialization and higher degree of elite management, according to a general model for understanding social organization of craft production.[44] The four burials (all adults, the three individuals whose sex was identified were males), which were small in size with few or no grave goods, probably belong to craftsmen of lower status who worked in this area. A well-furnished burial containing two individuals with three pottery vessels (including two ritual vessels) and eight turquoise ornaments was found at Locality 4 in the eastern part of the site,[45] which may have been the residential area for the elite group. The spatial segregation of burials of different statuses suggests the existence of social stratification. The high-ranking personnel may have been the people who were in charge of the craft production at Dongxiafeng.

In Phase IV there seems to have been social turmoil at the site. Craft production in Locality 5 ceased, as pottery kilns, wells, and cave shelters were no longer being used.[46] Skeletons of 14 individuals, including men, women, and children, were found mostly on floors of seven cave shelters. The skeletons were dismembered, overlying each other, or mixed with animal bones, suggesting some kind of violence. In the meantime, slag began to occur in Locality 4 in the eastern part of the site, indicating that bronze production was carried on there (figure 5).

In Phase V (the Lower Erligang phase) the site became a fortified town, surrounded by a rammed-earth enclosure about 13 ha in area and a moat outside the wall (Figure 5). Bronze production continued in the eastern part of the site, indicated by three stone molds unearthed in Locality 4. Locality 5, the area used as the craft production center, became the site of a group of special edifices. The area was now situated in the southwestern corner inside the walled town, where more than 40 round-shaped structures (20 of them were excavated) were built arranged in seven rows, each consisting of six to seven individual structures (figure 7).

These structures were built to a uniform design. Each one was 8.5–9.5 m in diameter, and the floor was a rammed-earth platform above the surrounding ground level, 30–50 cm in thickness. In the center of each structure was a large posthole, 20–30 cm in diameter and 80 cm deep. On the surface of the foundation was a cross-shaped ditch, 50–60 cm wide and 20 cm deep, with postholes placed inside the ditch. On the edge of each structure were 30–40 densely arranged small postholes (figure 8).

The form of these structures, which has not been seen at any other contemporaneous site, lacks the characteristics of residential shelters. These were wooden structures without solid earthen walls, the divided floor spaces are very small, and no doors have been found. Except for a few sherds, little was found on the floor surfaces. These structures, nevertheless, share some similarities with granaries dated

[44] Cathy L. Costin, "Craft specialization: Issues in defining, documenting, and explaining the organization of production," in Michael B. Schiffer, ed., *Archaeological Method and Theory* (Tucson: University of Arizona Press, 1991), 1–56.

[45] Institute of Archaeology et al., *Xiaxian Dongxiafeng*, 49–100.

[46] There is one stone mold and some slag unearthed from middens of Locality 5, according to the report. But these may well have been disturbed from the early stratum.

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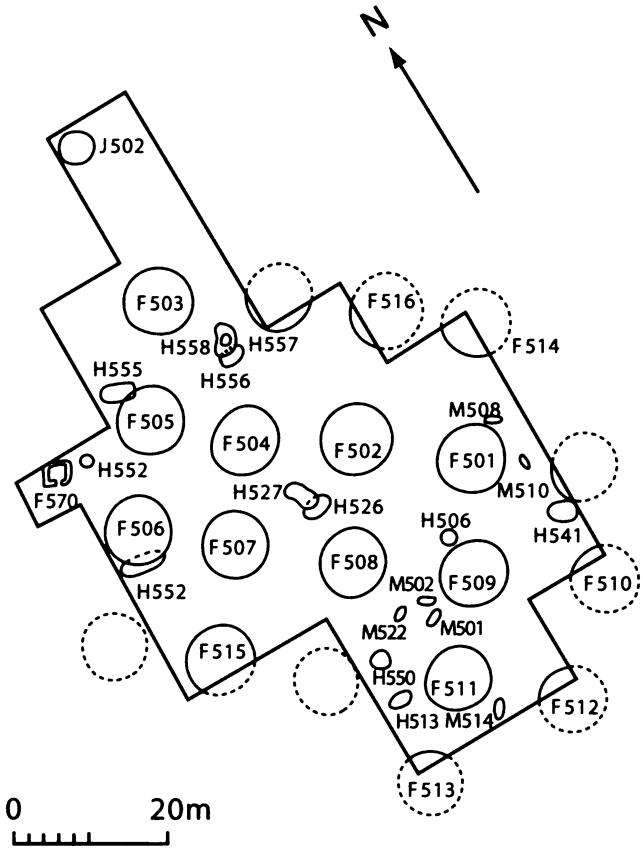
Figure 7. Storage facilities dated to Dongxiafeng Phase V (Early Shang), found in Locality 5 at Dongxiafeng (after Dongxiafeng, fig. 138).



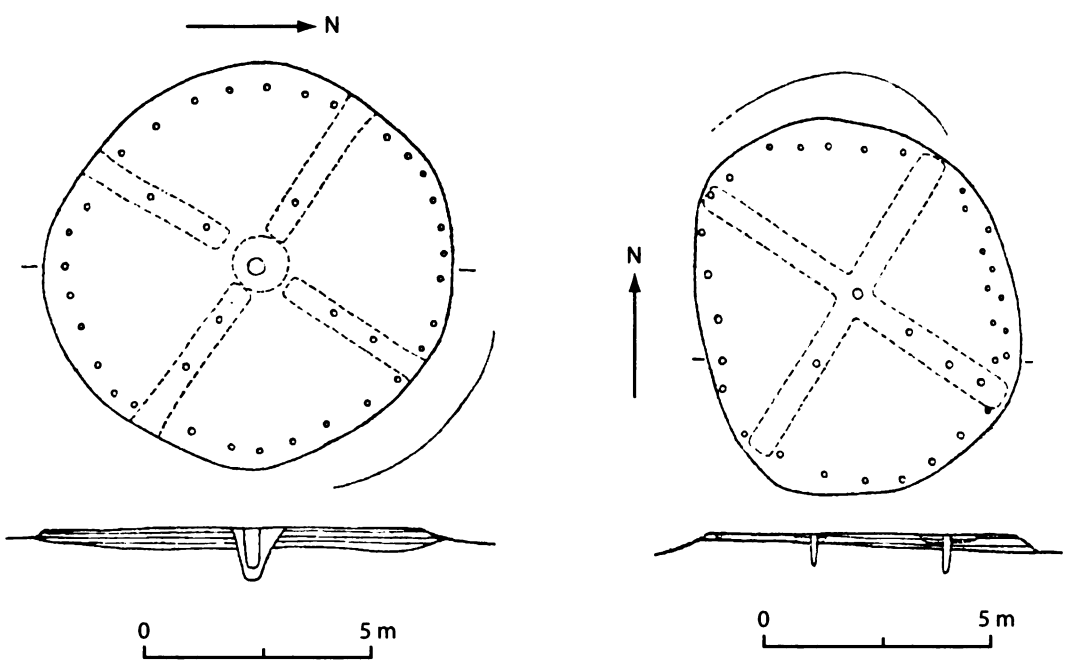


Figure 8. Examples of the storage structure dated to Phase V at Dongxiafeng (after Dongxiafeng, fig. 139, 140).

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to later periods.[47] These structures are placed on high platforms and made of wood, and are designed to ensure a dry condition and adequate ventilation, which are the major concerns for storage facilities. However, these structures are unlikely to have been granaries for two reasons. Firstly, grain-storage facilities found at many sites dating to the Shang or earlier times were constructed as subterranean pits rather than above-ground structures.[48] Secondly, a large part of the Yuncheng basin was covered by lakes and saline land unsuitable for agricultural production, and settlements were small and scattered.[49] Farmers there, therefore, were unlikely to produce sufficiently large quantities of grain to fill such large storage facilities.

Considering the special natural resources available in the Yuncheng basin, these facilities were probably used for storing the product uniquely produced here—salt; as Kwang-chih Chang has rightly pointed out 20 years ago that Shang people may have obtained salt from southern Shanxi.[50]

According to *Tiangong kaiwu* (*Chinese technology in the seventeenth century*) written in the Ming dynasty, a traditional method for salt storage needs no closed barns, but "a three-inch layer of straw on the ground will suffice to protect the salt from dampness. If around this [store salt] a wall of sun-baked brick and mud plaster is erected and covered with thatch about one *chih* thick, the salt will remain in good condition indefinitely". The constructing method of structures at Dongxiafeng apparently conforms to the salt storage facilities revealed in this ethnohistorical information. The closely spaced salt storages depicted in *Tiangong kaiwu* (which was illustrated in a Qing dynasty edition) is also similar to the spatial arrangement of the Dongxiafeng structural remains (figure 9).[51]

The salt deposit—the Hedong Salt Lake—is about 30 km southwest of Dongxiafeng today. It is composed of several salt marshes, among which the largest one is about 25 km long and 3.5 km wide. It is unknown how large the salt lake was in early historic times. According to local archaeologists a layer of mirabilite has been found about 12 m below modern ground surface extending to a large area surrounding the Salt Lake. Such a layer of mirabilite is also found in the salt lake.[52] Therefore, the salt lake was probably much larger in ancient times than at present.

Both Dongxiafeng and the salt lake are close to the Qinglong River, which may have facilitated transportation of the product (figure 2). The structures at Dongxiafeng may have been used for storing a large quantity of salt which later would be transported to large cities in Yanshi and Zhengzhou and other regions. If this were the case, however, we need to explain why the storage facilities were installed at Dongxiafeng, which is situated north of the salt lake, while the large urban centers

47 Cheng Pingshan and Zhou Jun, "Dongxiafeng Shangcheng nei yuanxing jianzhu jizhi xingzhi luexi (Analysis of the nature of the round-shaped architectural foundations at the Dongxiafeng Shang town)," *Zhongyuan wenwu* 1998.1: 73–76; for illustrations of ancient granaries in China, see Du Baoren, "Woguo liangcang de qiyuan he fazhan (The origins and development of granaries in China)," *Nongye kaogu* 1984.2: 306–307.

48 Du Baoren, "Woguo liangcang de qiyuan he fazhan."

49 Institute of Archaeology, "Jinnan kaogu diaocha baogao," 39.

50 Kwang-chih Chang, *Shang civilization* (New Haven: Yale University Press, 1980), 258.

51 Sung Ying-hsing, *T'ien-kung k'ai-wu*, 113, 115. It is notable that salt storage was also very similar to granary storage in ancient China. Therefore, it may be difficult to distinguish the two kinds of facilities based only on the form of structure. Chemical analysis of soil samples from Dongxiafeng is needed to test the hypothesis.

52 Li Baiqin 1999, personal communication.

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Figure 9. Salt storage facilities depicted in *Tiangong kaiwu*, originally printed in A.D. 1637 (after Sung Ying-hsing, *Tien-kung kai-wu*, 113).

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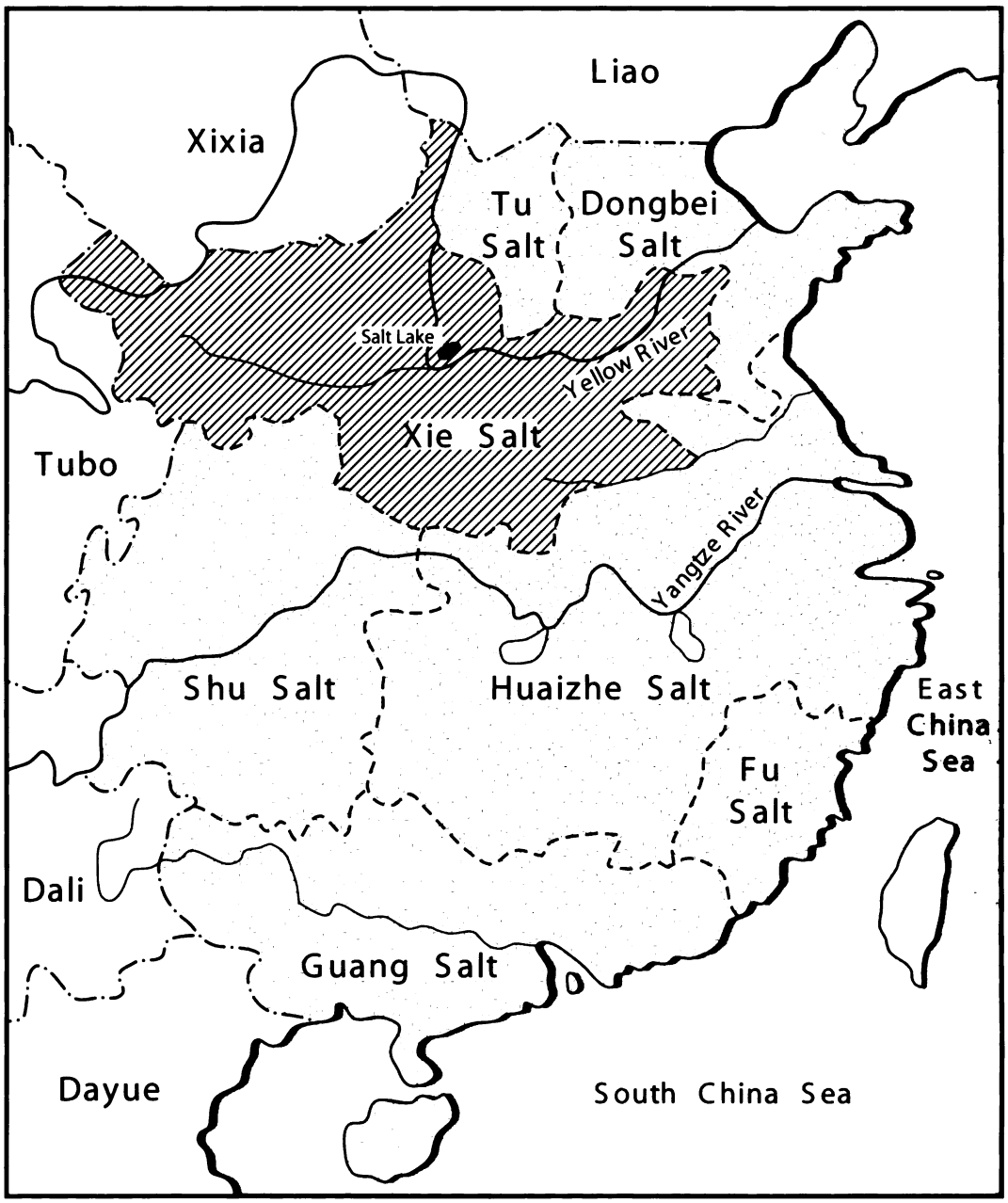

Figure 10. The official distribution areas for salt produced in different regions, as recorded in the Song dynasty, indicating that Hedong salt (Xie salt), after production, was distributed in the middle Yellow and Huai River valleys (redrawn from Guo Zhenzhong, *Zhongguo yanye shi*, 271).

were located to the southeast of the salt lake. Examining ancient salt distribution areas and transportation routes may solve this puzzle.

The salt from the Hedong Salt Lake was traditionally known as Xie salt. Its historical distribution areas, as best documented in the Northern Song dynasty (A.D. 960–1126), included Shanxi, Hebei, Shaanxi, Gansu, Henan, and northern Hubei

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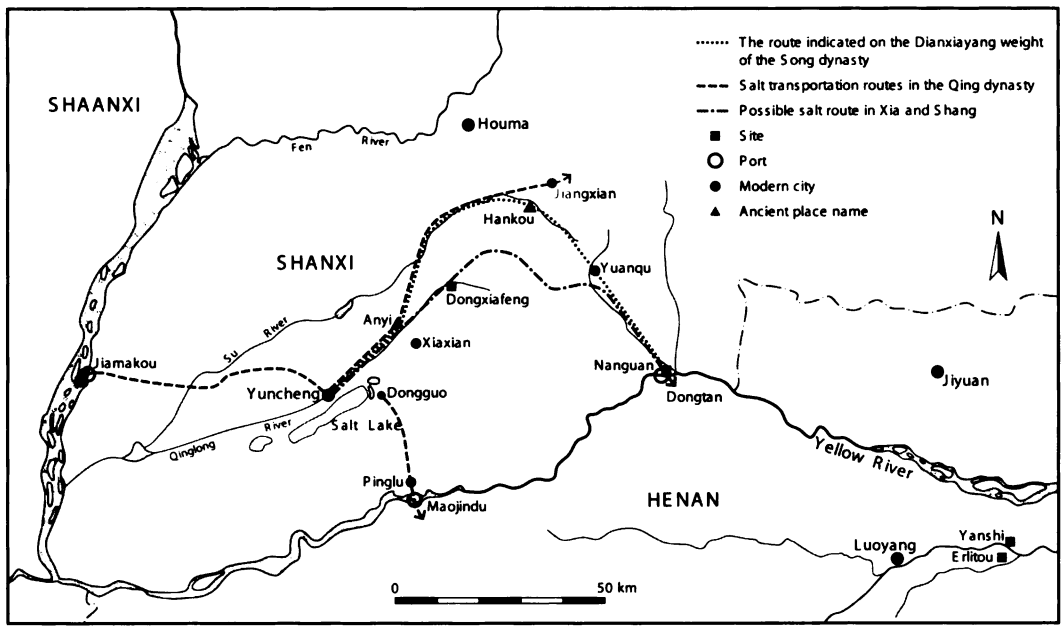

Figure 11. Reconstruction of Hedong salt transportation routes, including (1) three routes (the northern, southern, and western routes) recorded in the Qing dynasty, through which Hedong salt was transported to the surrounding regions; (2) the route from the salt lake to Yuanqu recorded in the inscriptions on the Yuanqu weight; and (3) a modern road connecting Dongxiafeng and Yuanqu, which may have been used as a salt route in the Xia and Shang periods.

(figure 10).[53] Since natural resources like salt are rather stable in terms of availability, a similar distribution area may be traced back to early dynastic eras.

The salt transportation routes, best recorded in the Qing dynasty (A.D. 1644–1911), are three: first, for the western route the salt was carried on land roads to the Jiamakou port on the Yellow River, then shipped by boat on the Yellow and Wei Rivers to the Shaanxi region; second, on the southeastern route salt was carried across the Zhongtiao Mountains in Pinglu county, and shipped across the Yellow River through the Maojindu port, leading to further transport in Henan; and third, for the northern route salt was transported through Xiaxian, Wenxi and Jiangxian, and distributed in northern Shanxi and Hebei[54] (figure 11).

Among these routes, the southern one through Pinglu was the most difficult, as the road was mostly in steep mountain areas.[55] These routes may not have been exactly the same in early historic times. Given that the mountainous topographic conditions in the regions restrained both availability of travel routes and feasibility of wheeled vehicles for moving heavy loads before the modern era, it is possible that general directions of transportation routes were largely unchanged and transportation methods were primarily relied on animal or human carriers in ancient times, as depicted in the Song documents (figure 13). Based on its location, therefore, Dongxiafeng was likely a salt transportation station situated on the northern route.

[53] Guo Zhengzhong, *Zhongguo yanye shi: Gudai bian*. Beijing: Renmin, 1997), 270–71.

[54] Chai Jiguang, *Yuncheng yanchi yanjiu*, 46, 55.

[55] Wei Si, "Tangdai de Hedong yanchi (The Hedong salt lake in the Tang dynasty)," in Wei Si, ed. *Wei Si kaogu lunwenji* (Taiyuan: Shanxi Guji, 1998), 194.

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Moreover, a stone weight, the *Yuanquxian dianxiayang* (the weight of Yuanqu county) discovered at the Dongtan village in Yuanqu,[56] provides significant information for the understanding of salt transportation. This 140 kg-weight, made in A.D. 1092 (Song dynasty; figure 12), was used to measure the quantity of salt bags transported from the Hedong Salt Lake (see figure 13 for an image of salt bags being weighed at the salt lake).

Based on the inscriptions carved on the weight, three such objects were made and placed at transportation stations in Anyi, Hankou, and Yuanqu along a salt route. The weight placed at Hankou was made 0.5 kg lighter than the one at Anyi, and the one at Yuanqu was 0.5 kg lighter than the one at Hankou. This system was designed to prevent salt from being stolen by allowing a standard weight to be lost from each salt package during each interval of its long transport (more than 150 km). Ancient Anyi was located in Xiaxian 7.5 km to the north of the salt lake;[57] and Hankou is the present day Lengkou in Jiangxian county, which was the entry to the Zhongtiao mountains.[58] This route went across the Zhongtiao mountains to Yuanqu, apparently referred to as Dongtan, where the weight was found. Interestingly, Dongtan was near an ancient port, Qimindu, on the Yellow River, at which salt bags were down loaded on boats for further transport.[59] More importantly, Dongtan is located immediately south of the Yuanqu Shang town (Figure 11; see discussion below). The inscriptions on the weight suggest that the Hedong salt was transported to the southeastern distribution regions through the northern route and the Yuanqu area.

It is also possible that a large quantity of salt was transported

Figure 12. The stone weight from Yuanqu county, bearing inscriptions about salt transportation routes in the Song dynasty (Chai Jiguang, *Yuancheng yanchi yanjiu*, plate 5).

[56] Guo Zhengzhong, "Guanyu Songdai 'Yuanqu xian dianxiayang' de jidian kaoshi (On the 'Yuanqu county weight' of the Song dynasty), *Wenwu* 1987.9: 11–13;" Wang Zeqing and Lü Jishu, "'Yuanqu dianxiayang' jianshu (Preliminary report of "Yuanqu weight")," *Wenwu* 1986.1: 78–79.

[57] Xiaxian County Chronicles Editorial Board, *Xiaxian zhi* (Beijing: Renmin, 1998), 1.

[58] Chai Jiguang, *Yuancheng yanchi yanjiu*, 46, 55–56.

[59] Ibid., 56.

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Figure 13. A depiction of salt harvest, storage, and transportation, in a Song dynasty document, "Xieyan" in *Bencao* (Guo Zhengzhong, *Zhangguo yanye shi*, plate 14). This shows that the salt was packaged in bags, and that each bag was weighed before being loaded onto a horse or donkey for further transportation.

through the northern route to Dongxiafeng, then turned to the east across the Zhongtiao Mountains to the Yuanqu basin, and finally reached the Yuanqu Shang town before being shipped to the capital cities. There is indeed a modern road directly connecting the Dongxiafeng area with the Yuanqu basin through the mountain region today (figure 11). This route may have long existed in antiquity and have been used for salt transportation. As mentioned above, the southern salt route through Pinglu was steep; therefore, the one through Dongxiafeng and Yuanqu were likely a major route for transporting salt to the southeastern regions where the Erlitou and Shang capitals were located.

The archaeological remains of Phase V at Dongxiafeng indicate that the activities relating to craft production and salt storage were confined to areas inside the walled town. They also suggest the existence of state-controlled enterprises in bronze metallurgy and salt production.

Phase VI of the Dongxiafeng site (the Upper Erligang phase) seems to have experienced a decline. The storage facilities were no longer used, and no slag or stone moulds have been found in the excavated areas (table 2). This suggests that both salt and bronze production may have considerably decreased, but may have not been entirely halted, at least for the salt industry. Archaeological features mainly include a few ash pits and burials. This walled town, together with eight out of the other ten Erligang sites in the Yuncheng basin, was finally abandoned in the end of Phase VI. Only two small sites continue to be occupied in the beginning of the late Shang

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period (Dasikong Phase I). Afterwards, the basin remained depopulated until the Western Zhou in the eleventh century B.C. (table 1).[60]

Based on the archaeological remains at Dongxiafeng, we can attempt to reconstruct the process of social change taking place in the basin. During the Erlitou period, Dongxiafeng was the regional center in the Yuncheng basin. Beginning from Erlitou Phase III, it seems to have engaged in full-time craft specialization with elite-controlled copper/lead mining, bronze metallurgy, ceramic manufacture, and, possibly, salt production and transportation. The bronze workshops at Dongxiafeng appear to have manufactured mainly weapons and small tools, probably for local usage only—military activities and copper/lead mining in the region. However, the mining activities were not merely local concerns, but probably operated on a large scale and controlled by the Erlitou state. The collectively built residential compound together with the craft center in a restricted area at Dongxiafeng suggests the craft production was probably organized by the state and conducted by state-attached craftsmen.[61]

As evidenced at Tongling in Jiangxi,[62] Tonglushang in Hubei,[63] and Eastern Han copper mines at Donggou in Yuncheng, southern Shanxi,[64] the ore-dressing and smelting process took place near the copper mines. Therefore, miners were perhaps settled in locations close to their working areas, as indicated by the large quantity of pottery sherds indeed visible near the mining areas at Tonglushan[65] and in the Zhongtiao Mountains.[66]

It is most likely that only metal ingots were transported to bronze foundries in capital cities for casting bronze objects. Therefore, during the Erlitou and Erligang periods ore dressing and smelting were also carried out near the copper mines in the Zhongtiao mountains, close to the sources of ore and easy access to fuel (wood). Settlements of the miners were probably distributed in the mountains. Unfortunately, no systematic archaeological survey has been extended to these regions. Today, the Zhongtiaoshan Mineral Company with 20,000 employees is located in the Zhongtiao mountains. The company is engaged in copper mining and smelting industries (Lu Dacheng, 1999 personal communication). Many villages are also situated along rivers in the mountains.[67] Therefore, there is a great potential for finding ancient smelting and settlement sites in the region. Salt may have also been a state-controlled product, since the Hedong Salt Lake was the only salt supply available in the Henan and Shanxi region where Erlitou sites were distributed. However, these hypotheses remain to be tested archaeologically.

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60 Institute of Archaeology, "Jinnan kaogu diaocha baogao," 40.

61 For a definition of attached craft production see Cathy L. Costin, "Craft specialization," and "Craft production systems" in Gary M. Feinman and T. Douglas Price, eds., *Archaeology at the Millennium: A Sourcebook* (New York: Kluwer Academic/Plenum Publishers, 2001), 273–328; also Elizabeth Brumfiel and Timothy Earle, "Specialization, Exchange, and Complex Societies: An Introduction," in E. Brumfiel and T. Earle, eds., *Specialization, Exchange, and Complex Societies* (Cambridge: Cambridge University Press, 1987), 1–9.

62 Liu Shizhong and Lu Benshan, "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu."

63 Xia Nai and Yin Weizhang, "Hubei Tonglushan gutongkuang (Ancient copper mines at Tonglushang, Hubei)," *Kaogu xuebao* 1982.1: 1–13.

64 An Zhimin and Chen Cunxi, "Shanxi Yuncheng Donggou de Donghan tongkuang he tiji (Inscriptions of the Eastern Han at the Donggou copper mines in Yuncheng, Shanxi)," *Kaogu* 10 (1962): 519–22.

65 Xia Nai and Yin Weizhang, "Hubei Tonglushan gutongkuang," 8.

66 Li Yanxiang, "Zhongtiaoshan gu tongkuangye yizhi chubu kaocha yanjiu."

67 Authors' observation, September 1999.

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Although hypothetical, the proposed function of Dongxiafeng can be supported by its strategic location. It is situated between the salt marshes in the alluvial plains and the copper mines in the Zhongtiao Mountains. The Qinglong River, which originated in the mountainous region, connected the mining areas to Dongxiafeng and the Hedong salt marshes. The resources—including copper, lead, and salt—obtained from this region, therefore, could be transported eastward through the Zhongtiao Mountains to the Yuanqu Basin, and then through the Yellow River and its tributaries to the core area of the state. The function of the Dongxiafeng site, therefore, may have been mainly for controlling the copper/lead mining and smelting activities and salt production, and for transporting these products to the capital city.

The decline of Erlitou culture and the rise of Erligang culture took place in the Yi-Luo region during Phase IV of the Erlitou period. This process evidently affected southern Shanxi, as the Erlitou assemblages in southern Shanxi was then replaced by the Erligang culture, probably as the result of the Shang population intrusion. Some dismembered human skeletons found on floors of cave shelters at Dongxiafeng may be related to this perhaps violent event. This population expansion of the Shang was obviously for the same reason as that for which the Erlitou people had earlier moved to the northwest—to control important natural resources available in the region.

During the Lower Erligang phase, salt may have been produced in a large quantity and systematically stored at Dongxiafeng as a reserved supply for the state. While the salt storage facilities replaced the craft production center in the south of the site, bronze metallurgy continued to be carried out in the east of the site. The state control of the materials produced here is implied by the construction of fortification, which secured the production and transportation of the vital resources to the core area and other parts of the kingdom.

Both salt and bronze industries fell into decline in the Upper Erligang phase, leading to the abandonment of the town and most Shang settlements before the Yinxu period. The Shang population then completely disappeared from the Yuncheng basin.

III.2. The Yuanqu basin and the Yuanqu Shang town

The Yuanqu basin in southern Shanxi is also situated in a highly circumscribed region, surrounded by the Wangwu, Taihang, and Zhongtiao Mountains in the east, north, and west, and by the Yellow River in the south.[68] The basin was occupied by Neolithic settlements dated to the Yangshao and Longshan periods (5000–2000 B.C.). During the Erlitou period the Yuanqu basin became densely populated by fifteen settlements, centered on the Nanguan site (figure 2). However, in the succeeding Erligang period, only six sites have been found in the southern part of the basin. Nanguan became a fortified site, known as the Yuanqu Shang town (figure 3). Just like the Yuncheng area, the Yuanqu basin became depopulated sometime

[68] Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng: 1985–1986 niandu kancha baogao* (Beijing: Kexue Press, 1996), 4–7.

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towards the end of the Erligang period for a few hundred years until the Western Zhou culture was established in the eleventh century B.C.[69]

The Nanguan site lies on a sloping terrace, higher in the north and lower in the south, above the flood plain, about 50 m higher than the bank of the Yellow River. It is surrounded by the Yellow River on the south, the Boqing River on the north and east, and the Zhongtiao Mountains on the west. After a brief occupation in the late Yangshao period (c. 3500–3000 B.C.), the site was abandoned during the Longshan period. It was populated, however, during the late Erlitou period (the Dongxiafeng variant; Phases III and IV of the Erlitou culture).

Nanguan seems to have been enclosed by double ditches in the later Erlitou period (figure 14).[70] The inner ditch was wider and deeper than the outer ditch,[71] and cave shelters have been found dug into the vertical walls of the inner ditch.[72] This is the same layout of residential structure as seen at Dongxiafeng. The outer ditch may have been made for protecting the inner ditch from mountain torrents coming from the high lands in the northwest as well as for defensive purposes.[73] Furthermore, the Nanguan site, as at Dongxiafeng, may have been a craft production center enclosed by the double ditches, engaging in pottery making and bronze metallurgy. Traces of the potter's craft (potter's tools), and metallurgy (metal slag, and a stone mold for casting bronze pickaxes), have been found in the southern part of the site (table 3).[74] Evidence of violence was also present here—a bronze arrowhead embedded in a human cervical vertebra was found in an ash pit dated to the Late Erlitou period.[75]

The site reached its peak in the Erligang phase. It was enlarged in size, and enclosed by rammed-earth walls (13 ha) constructed in the late period of the Lower Erligang phase.[76] The western and southern sides of double-layered town walls

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69 Institute of Archaeology, "Shanxi Yuanqu guwenhua yizhi de diaocha (Survey of ancient sites in Yuanqu, Shanxi)," *Kaogu* 1985.10: 875–84; Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng: 1985–1986 niandu kancha baogao*; "1988–1989 nian Shanxi Yuanqu gucheng Nanguan Shangdai chengzhi fajue jianbao (Preliminary report of excavations at Yuanqu Shang city in Shanxi, 1988–1989)," *Wenwu* 1997.10: 12–29; "1991–1992 nian Shanxi Yuanqu Shangcheng fajue jianbao (Preliminary report of excavations at Yuanqu Shang city in Shanxi, 1991–1992)," *Wenwu* 1997.12: 4–15; Tong Weihua, "Shangdai qianqi Yuanqu pendi de tongzhi zhongxin—Yuanqu Shangcheng (The political center of the early-Shang period in the Yuanqu basin—the Yuanqu Shang town)," *Zhongguo lishi bowuguan guankan* 1 (1998): 89–100.

70 Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu (On the time of initial construction of the Yuanqu Shang site)." *Zhongyuan wenwu* 1997.2: 39–44.

71 The inner ditch is 5–12 m wide at ground level, 2–5 m wide at the bottom, and 4–6 m deep. The outer ditch is 3–4 m at ground level, 1.4–2 m wide at the bottom, and 2.7–6.6 m deep (Historical Museum of China and Shanxi Institute of Archaeology 1996: 14–21; Dai Xiangming, "Yuanqu Shangcheng fajue huo zhongyao chengguo (Important gains from the excavations at Yuanqu Shang town)," *Zhongguo wenwubao* Sept. 6, 1998.

72 Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu," 43; Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng: 1985–1986 niandu kancha baogao* (Beijing: Kexue Press, 1996) 17–18.

73 Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu," 43.

74 Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng: 1985–1986 niandu kancha baogao* (Beijing: Kexue Press, 1996), 95, 118, 135, 146–47.

75 Ibid., 155.

76 Wang Rui, "Yuanqu Shangcheng de niandai jiqi xiangguan wenti (Dates of the Yuanqu Shang town and related issues)," *Kaogu* 1998.8: 81–91; Historical Museum of China and Shanxi Institute of Archaeology, "1991–1992 nian Shanxi Yuanqu Shangcheng fajue jianbao (Preliminary report of excavations at Yuanqu Shang city in Shanxi, 1991–1992), *Wenwu* 1997.12: 4–15.
The Yuanqu town is 338 m on the northern side, 395 m on the western side, 336 m on the eastern side, and 400 m on the southern side.

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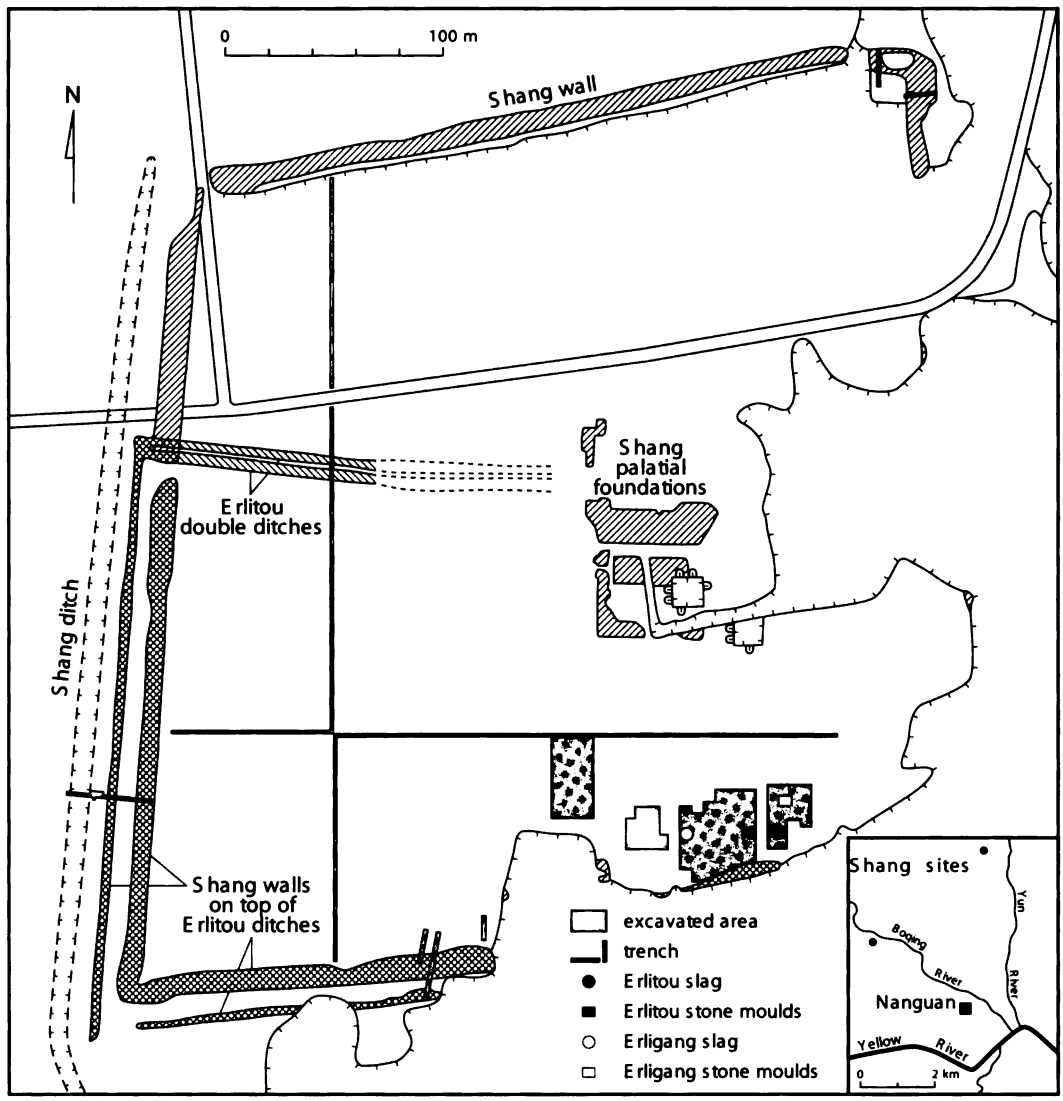

Figure 14. Map of the Yuanqu Shang town, showing positions of the Erlitou double ditches and locations of Shang palatial foundations and artifacts relating to bronze metallurgy (redrawn from Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng*, Figure 3; "1988–1989 nian Shanxi Yuanqu gucheng Nanguan Shangdai chengzhi fajue jianbao," Figure 1; "1991–1992 nian Shanxi Yuanqu Shangcheng fajue jianbao," *Wenwu* 1997.12, Figure 1; Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu" *Zhongyuan wenwu* 1997.2, Figure 8).

were built directly on top of the Erlitou double ditches, while the northern and eastern sides of the walls were newly expanded.[77] The fortification was built probably not only for effective military defense,[78] but also for the control of mountain torrents and river floods, inasmuch as a large portion of the southern walls has been destroyed by the Yellow River. During the Erligang period, cultural remains were found distributed over the entire site. The southern part of the site continued to be

[77] Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu."

[78] Cao Bingwu, "Cong Yuanqu Shangcheng kan Shangdai kaogu de jige wenti (Discussion on some issues regarding the Shang dynasty based on the data from the Yuanqu Shang town)," *Wenwu* 1997.12: 84–89.

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a center of craft production, suggested by the discovery of a stone mould for making bronze objects, metal slag, and six pottery kilns in this area (table 3). Rammed-earth foundations have been found near the center of the town, suggesting that temple/palatial structures were constructed, perhaps for administrative purposes. The Erlitou northern ditches were now filled, and became a major road connecting the palatial area with the gate in the western town wall.[79] Two elite burials (M1, M16) furnished with elaborate grave goods, including a number of jade, bronze, and pottery objects (table 3), and a human sacrifice (in M16) have also been discovered in the southern part of the site. These remains, as at Dongxiafeng, suggest the existence of a group of people belonging to a high-ranking social stratum, who were probably in charge of the craft production at the Yuanqu town. Violence evidently continued in the Erligang period—several burials or pits contained dismembered skeletons, and an arrowhead was found embedded between the tibia and fibula of a human skeleton. The town was finally abandoned in the early period of the Upper Erligang phase (figure 14).[80]

Table 3. Bronze objects and evidence for bronze and ceramic production from Yuanqu*

Phases	Erlitou III & IV	Lower Erligang	Upper Erligang
Bronze arrowheads	1	Present	Present
Bronze knives		Present (*dao, bi, xiao*)	Present (*dao*)
Bronze vessels		1 *jue*, 2 *Jia* from Burial M16	1 *jia*, 1 *ting*, & 1 *Jue* from Burial M1
Slag	Present		Present
Stone moulds	1 for pick	1 inner mould	
Ceramic production	4 potter' tools	1 kiln	5 kilns, 2 potter's tools

* Data based on the publications of the Historical Museum of China and Shanxi Institute of Archaeology (1996, 1997a,b).

It is notable that, in spite of all these finds discovered inside the town wall, very few archaeological remains are dated to the Erligang period in the rest of the Yuanqu basin. Only six sites, located in the north and west of the town, have yielded materials belonging to the Erligang culture (figure 3).[81] This raises a question about the nature of the Yuanqu Shang town. The walled town did not exist in isolation in the Yuanqu basin. We are assuming that the fortification was constructed for defence, and that warfare explains the evidence of violence and mutilation of some corpses. It is possible, as in the Yuncheng basin, that more Shang settlements, occupied by people who conducted mining, ore dressing, and smelting, were distributed in mountainous regions near the copper/lead mines in the Zhongtiao Mountains. Further archaeological surveys may provide evidence of such sites.

[79] Dong Qi, "Yuanqu Shangcheng yizhi shijian niandai yanjiu."

[80] Dai Xiangming, "Yuanqu Shangcheng fajue huo zhongyao chengguo;" Historical Museum of China and Shanxi Institute of Archaeology, *Yuanqu Shangcheng: 1985–1986 niandu kancha baogao*; "1988–1989 nian Shanxi Yuanqu gucheng Nanguan Shangdai chengzhi fajue jianbao;" "1991–1992 nian Shanxi Yuanqu Shangcheng fajue jianbao;" Wang Rui, "Yuanqu Shangcheng de niandai jiqi xiangguan wenti."

[81] Tong Weihua, "Shangdai qianqi Yuanqu pendi de tongzhi zhongxin: Yuanqu Shangcheng."

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Moreover, the Yuanqu town was located at the confluence of the Boqing River and the Yellow River (figure 3). Having easy access to both rivers seems to have been the priority in the town planning, despite the constant threat of floods from the Yellow River, which indeed destroyed a large part of the southern walls in antiquity. The aforementioned stone weight, used in relation to salt transportation in the Song dynasty, was discovered at Dongtan, which is located next to the Yuanqu Shang town, indicating that Nanguan may have been near an ancient port. It is very likely that the Nanguan site in Erlitou times and then the Yuanqu town in Erligang times were established as regional centers at a junction of water routes. This was to control the mining industries in the Yuanqu area, and to transport copper/lead ingots produced in the Zhongtiao Mountains as well as salt from the Dongxiafeng area. Through the port, these goods may have been transported on the Yellow River and its tributaries to the cities in the core areas around Erlitou and Zhengzhou.

Another Shang site dated to the Erligang phase, Qianzhuang in Pinglu county, was found about 50 km west to the Yuanqu Shang town. The site is located on top of a stone cliff, next to, and 20 m above the Yellow River. The stone cliff below the site is very steep, and a towing path, which is still visible today, had been made for boat tracking in ancient times.

The site is also situated in the confluence of the Shigao River and the Yellow River, a position similar to the Yuanqu town. The Shigao River originates in the Zhongtiao Mountains, where copper deposits occur (figure 3). In spite of its small size (1 ha), the site appears to be somewhat special. House foundations, pits, six bronze ritual vessels including three large ding cauldrons more then 70 cm in height, two bronze adze-heads, a few dozen bronze arrowheads, and a large chime stone have been found there.[82] These bronzes may have come from a hoard. Unfortunately, as the locals dug up the bronzes and the contextual information was lost (Li, Baiqin 1999, personal communication). Qianzhuang may have also been an outpost set up the junction of water channels near the copper resources by the Shang state to control copper mining.

Being located so close to the Yellow River, Yuanqu and Qianzhuang could also protect and monitor the transportation of raw materials obtained from regions upstream, such as the Wei River valleys in Shaanxi and the Yuncheng and Linfen basins in southern Shanxi, so that the procurement and flow of resources from many areas to the west of the capital cities could be secured.

III.3. The Linfen basin

The Linfen basin is the largest of the three basins in southern Shanxi. The alluvial plains were drained by the Fen and its tributaries and surrounded by the Lüliang, Ermei, and Taiyue Mountains. Copper deposits occur in mountain ranges (figure 2),

[82] Wei Si, "Pinglu xian Qianzhuang Shangdai yizhi chutu wenwu (Artefacts unearthed from the Shang dynasty site at Qianzhuang in Pinglu county)," *Wenwu jikan* 1 (1992): 18–19; Li Baiqin, "Shanxi Pinglu Qianzhuang yizhi qingli jianbao (Brief report of excavation of the Shang site at Qianzhuang in Pinglu, Shanxi)," *Wenwu jikan* 4 (1994): 3–9.

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and the Taosi site in this region yielded one of the earliest metal objects in north China, a copper bell, dating to the late Longshan culture (c. 2600–2000 B.C.).[83]

As in the Yuncheng and Yuanqu basins, the Linfen basin witnessed two waves of population intrusion in the Erlitou and Erligang periods. Based on archaeological surveys, some 38 sites belonging to the Dongxiafeng variant of the Erlitou period have been found in this region, mainly distributed in two clusters to the northwest and south of Mt. Ta'er.[84] The southern cluster consists of 16 sites, centered on Ganjun (20 ha). This center is surrounded by several possible large villages, which are multi-component sites ranging between 20 ha and 39 ha,[85] and a number of small villages less than 18 ha in size (figure 2). This settlement cluster is also distributed in close proximity to the copper/lead mines in the surrounding mountains, indicating that mining may have also been conducted in this region. This hypothesis can be supported by the finding of a ceramic crucible from Dongbaizhong, a possible large village near Ganjun. The crucible has been dated to, at the latest, the Erlitou period.[86]

A similar settlement distribution, but with much reduced site numbers, continued in the early Shang period. There are eleven sites dated to the Erligang period and one dated to the beginning of the late Shang period (Dasikong Phase I) in the basin. Most sites are multi-component and small in size.[87] The regional center may have been situated at one of the two possible large villages, Guchengcun (22 ha) and Macecun (32 ha). Once again, this cluster of settlements is located near the copper mines in the Taiyue Mountains (figure 3).

Our knowledge of the Erlitou and Erligang cultures in the Linfen basin is much less comprehensive than that of the Yuncheng and Yuanqu basins, due to insufficient archaeological work focusing on these two periods. However, based on the settlement patterns observed here, it is likely that the procurement of copper/lead was also associated with population expansion of the Erlitou and Erligang periods in this region.

III.4. Peripheral regions and the control of natural resources

Dongxiafeng and Nanguan shared many characteristics in the processes of their development. First, both sites were situated at locations in a resource-rich environment with easy access to river channels that connect these regions to capital cities. Second, in the late Erlitou period they both were regional centers with similar settlement layout: a craft center with residential area enclosed by double ditches. Third,

[83] Shanxi Team, Institute of Archaeology, CASS. "Shanxi Xiangfen Taosi yizhi shouci faxian tongqi (First copper object discovered at the Taosi site in Xiangfen, Shanxi)," *Kaogu* 1984.12: 1069–1071.

[84] Institute of Archaeology, "Jinnan kaogu diaocha baogao;" Shanxi Provincial Institute of Archaeology, "Ta'er shan nanlu guyizhi diaocha jianbao (Preliminary report of archaeological surveys in the southern area of Mt. Ta'er)," *Wenwu jikan* 3 (1992): 17–22.

[85] Since no accurate measurement of each cultural occupation has been attempted from those multi-component sites, we treat them as possible large villages.

[86] Shanxi Provincial Institute of Archaeology, "Ta'er shan nanlu guyizhi diaocha jianbao."

[87] Institute of Archaeology, "Jinnan kaogu diaocha baogao;" Shanxi Provincial Institute of Archaeology, "Ta'er shan nanlu guyizhi diaocha jianbao."

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both centers were engaged in specialized production (mining, metallurgy, ceramic manufacture, and salt production/transportation), utilizing local resources; and the acquisition of the resources (especially copper/lead and salt) may have been controlled by the state. Fourth, both settlements experienced violence or warfare during the transitional period from the Erlitou to the Shang; this situation continued to the Lower Erligang period at Nanguan. Fifth, in the Lower Erligang period, both sites became fortified towns constructed by the Shang state, again, for controlling and transporting vital resources (copper/lead and salt) to the core regions centered on Zhengzhou. Finally, both towns were suddenly abandoned sometime during the Upper Erligang period.

The regional settlement patterns in southern Shanxi suggest that there may have been strategic colonization of this resource-rich region by early states. The northwestward expansion of the Erlitou settlements may have represented the first wave of population intrusion to this region, manipulated by the Erlitou polity, to some extent, for procuring the resources. Dongxiafeng and Nanguan may have been the strategic outposts installed by the Erlitou polity to control and transport these resources. The second wave occurred in the Early Shang, and the event was much more violent in nature. The two centers were then reinforced structurally by building town walls to ensure the flow of resources in this newly conquered region.

IV. Abandonment of Shang settlements in southern Shanxi and Shang population expansion toward the east and south

Since the walled towns and other Shang sites in southern Shanxi were primarily related to the procurement of copper, and salt, as argued above, the abandonment of these settlements may have also been related to these resources. It is notable that the disappearance of Shang sites in southern Shanxi coincides with the expansion of the Shang material culture towards the east and south during the Upper Erligang phase. The natural resources that the Shang procured from these two regions include salt and copper.

IV.1. Procurement of salt from the east

In the east, the entire Shandong region was occupied by the Yueshi culture during the Erlitou and Lower Erligang period. However, in the beginning of the Upper Erligang phase, some ten Shang settlements appeared in northern and western Shandong.[88] A group of Shang settlements centered on Daxinzhuang (30 ha) in Jinan, referred to as the Daxinzhuang variant,[89] may have been the first population intru-

[88] Zhang Xuehai, "Lun sishi nianlai Shandong xian Qin kaogu de jiben shouhuo (On the major achievement of pre-Qin archaeology in Shandong in the recent 40 years)," In Zhang Xuehai, ed. *Haidai kaogu* (Jinan: Shandong Daxue Press, 1999), 332–37.

[89] Xu Ji, "Shang wenhua Daxinzhuang leixing chulun (Preliminary study on the Daxinzhuang type of the Shang culture)." In *Zhongguo kaogu xuehui di jiuci nianhui lunwenji*, ed. Chinese Archaeological Association (Beijing: Wenwu Press, 1997), 205–20; "Jinan Daxinzhuang Shangdai wenhu yicun de zai renshi (Restudy of the Shang cultural remains at Daxinzhuang, Jinan)," in *Zhongguo Shang wenhua guoji xueshu taolunhui lunwenji* (Beijing: Zhongguo Dabaikequanshu Press, 1998), 265–81.

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sion to the northern Shandong region. The Daxinzhuang variant dated to a period from the beginning of the Upper Erligang to the Yinxu phase,[90] and gradually spread over an area whose northern part reached the Bohai Bay,[91] where salt could be produced from seawater.

Archaeological evidence relating to salt production in the late Shang period has indeed been found in the coastal regions. A type of ceramics, referred to as *kuixingqi* (helmet-shaped vessels), has been found at many sites near the coast. Such a vessel has very thick walls with pointed- or round-shaped bottom, the exterior was decorated with thick cord-marks, and traces of burning on the surface are visible in many cases. These vessels were different from ceramic types commonly seen in this region, and appear to have special functions. They have been found in small numbers at late-Shang sites near the southern coast of the Bohai Bay in northern Shandong, such as Dinggong in Zouping,[92] Fenghuangtai in Qingzhou,[93] and Zhaopu in Qingzhou.[94] In addition, four large pottery kiln sites were discovered in an area 30 km in length near Lijin in nothern Shandong, a region near the western coast of the Bohai Bay in early historical times (figure 1). A large assemblage of pottery found at these sites is dominated by *kuixingqi*, filters, and storage vessels (figure 15).

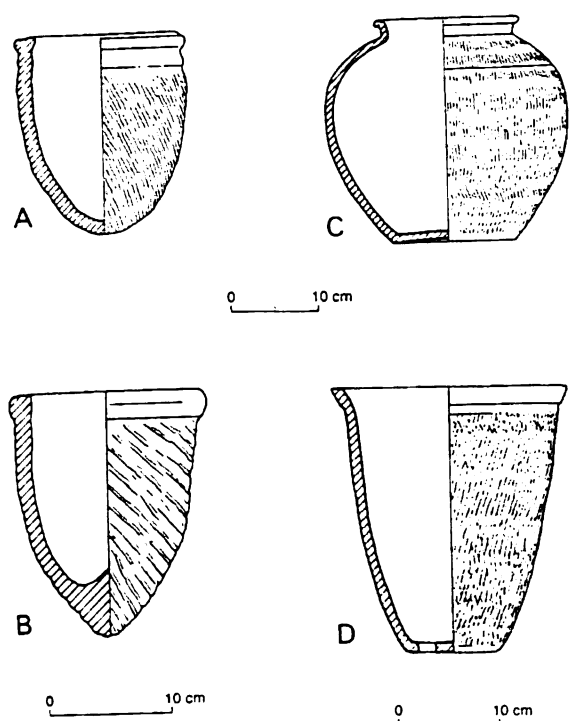

Figure 15. Examples of round- and pointed-bottomed pots (A, B), storage vessel (C), and filter (D) from kiln sites near Lijin, Shandong, used for salt production in late Shang (after Wang et al., "Shandong sichu dong Zhou taoyao," figures 3.2; 4.1,11; 5.11).

[90] Xu Ji, "Jinan Daxinzhuang Shangdai wenhu yicun de zai renshi."

[91] Xu Ji, "Shang wenhua Daxinzhuang leixing chulun (Preliminary study on the Daxinzhuang type of the Shang culture)," 218.

[92] Shandong University, "Shandong Zouping Dinggong yizhi di er, san ci fajue jianbao (Brief report of the second and third seasons of excavations at the Dinggong site in Zouping, Shandong)," *Kaogu* 1992.6: 503.

[93] Shandong Institute of Cultural Relics and Archaeology, "Qingzhou shi fenghuangtai yizhi fajue (Excavations of the Fenghuangtai site in Qingzhou city)," in Zhang Xuehai, ed., *Haidai kaogu* 1 (1989): 163.

[94] Xia Mingcai. "Qingzhou shi Zhaopu yizhi de qingli (Excavation of the Zhaopu site in Qingzhou city)," in *Haidai kaogu* 1 (1989): 195.

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Archaeologists have rightly pointed out that these *kuixingqi* vessels were used for salt-making by boiling down the seawater.[95] In Lijin, the three major types of vessels may have been utensils used in salt-making processes for boiling, filtering, and storing salt. A large number of broken pottery vessels produced in these Lijin kilns have also been found in areas near the kilns, suggesting that the salt-making processes were also carried out nearby.[96] These sites were dated to the Eastern Zhou period by the excavators, but many pottery vessels, including all types of salt-making utensils, can be dated to the Late Shang.[97]

Such a large-scaled and well-organized industry for salt making was probably administrated to some extent by the state, at least from the late Shang period in this region. Yang has identified several pieces of Shang oracle-bone inscriptions discovered at Anyang relating to salt (*lu*) management and tribute. The Shang state had officials titled *lu xiao chen* (the salt manager), who may have been responsible for the salt supply in the late Shang).[98] It is possible that salt production of a similar nature had already been under way in the Late Erligang period, but no traces have been found by archaeologists. Therefore, the abandonment of salt production in southern Shanxi in the Upper Erligang phase may have been the result of eastward expansion and the control of newly accessible salt resources in the coastal region by the Shang state. Furthermore, the salt produced in southern Shanxi tastes bitter[99] due to its strong magnesium chloride component,[100] which may have made it less desirable than the salt produced from the sea.

IV.2. Panlongcheng and the Procurement of copper from the south

The Shang cultural expansion toward the south also began in the Erligang period. Two major copper mining sites in the Yangzi River Valley—Tongling in Ruichang, Jiangxi province[101] and Tonglushan in Daye, Hubei province[102] — had been explored by the Shang (figure 1). The copper mining activities at Tongling seem to begin in the Upper Erligang period. This is indicated by the discovery of a pottery *jia* vessel of the Upper Erligang type inside an underground mining area, and on Carbon-14 dates obtained from wooden supports in mining shafts.[103] Copper mining activities at Tonglushan had already taken place in the Yinxu period, based on Carbon-14 dates of wooden samples from mining shafts.[104] But the beginning of exploitation

95 Shandong Institute of Cultural Relics and Archaeology, "Qingzhou shi fenghuangtai yizhi fajue," 180.

96 Wang Zengshan et al., "Shandong sichu Dongzhou taoyao yizhi de diaocha (Survey of four kiln sites of the Eastern Zhou in Shandong)," *Kaoguxue jikan* 11 (1997): 292–97.

97 Fang Hui 1999, personal communication.

98 Yang Shengnan, *Shangdai jingjishi*, 634.

99 Sima Qian, "Huozhi liezhuan," 3259–60.

100 Wang Xuetai, *Huaxia yinshi wenhua* (Beijing: Zhonghua Shuju, 1997), 44.

101 Jiangxi Institute of Cultural Relics, and Ruichang Museum, eds., *Tongling gu tongkuang yizhi faxian yu yanjiu* (Nanchang: Jiangxi Kexue Jishu Press, 1997); Liu Shizhong and Lu Benshan, "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu."

102 Xia Nai and Yin Weizhang. "Hubei Tonglushan gutongkuang."

103 Liu Shizhong and Lu Benshan, "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu," 466–70.

104 Institute of Archaeology, *Zhongguo kaoguxue zhong tan shisi niandai shujuji* (Radiocarbon dates in Chinese archaeology), (Beijing: Wenwu Press, 1991), 192–93.

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of copper in the Daye region may have started even earlier: copper smelting sites dated to the Erligang period have been found at Mianyangdi, Gutangdun, and Lihe in Daye, all located in close proximity to copper mines in the region.[105]

A walled Shang town at Panlongcheng is located near the Panlong Lake in Huangpi, Hubei province. As early as the Erlitou period, this site (20 ha in area) had become a bronze production center, as indicated by crucibles found in concentration within an area of 2 ha in the southern part of the site. This situation remained unchanged in the Lower Erligang period. A rapid development took place in the Upper Erligang period when the site size increased to 100 ha, and the walled town of 7.5 ha in size (290 x 260 m) was constructed in the center of the site. Palatial structures were built inside the town walls, while burials, settlements, and craft production centers were located in the surrounding areas (figure 16).[106]

Bronzes were made in the craft center in the south of the site, where slag and crucibles have been discovered.[107] Seven elite burials associated with 105 bronze objects were dated to a period from the Upper Erligang to Yinxi Phase I. The bronze assemblages and techniques used in the construction of architecture and town walls at Panlongcheng are very similar to those from Zhengzhou and Yanshi, pointing to its close affiliation with the north.[108]

Like Dongxiafeng and Yuanqu, Panlongcheng was situated in a major junction of water transportation routes, with easy access to the copper mines in adjacent areas.[109] During the Erlitou period, Panlongcheng became the regional center, at which craft production including bronze metallurgy was conducted. More than a dozen Erlitou culture sites have been found near Panlongcheng and in adjacent areas in northwestern Hubei.[110] The occurrence of the Erlitou cultural assemblages in this region indicates the earliest attempt by the early states in the north to control bronze resources in the Yangzi River Valley. Some Erlitou settlements were found in areas near copper resources.[111] However, no bronze objects dated to the Erlitou culture have been found in this region. The unchanged settlement pattern at Panlongcheng from Erlitou to Lower Erligang hints at a slow progress in bronze metallurgy-related activities. It is unclear, therefore, to what extent copper resources in south China were controlled by the Erlitou polity and the Shang in the Lower Erligang period.

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105 Huangshi City Museum, "Daye guwenhua yizhi kaogu diaocha (Archaeological surveys of ancient sites in Daye)," *Jianghan kaogu* 1984.4: 8–16.

106 Hubei Institute of Archaeology 2001; Hubei Provincial Museum and Beijing University, "Panlongcheng yijiuqisi nian tianye kaogu jiyao (Report of archaeological fieldwork at Panlongcheng in 1974)," *Wenwu* 1976.2: 5–15; Wang Jin and Chen Xianyi, "Shilun Shangdai Panlongcheng zaoqi chengshi de xingtai yu tezheng. (On the form and characteristics of the early city at Panlongcheng)," in *Hubeisheng kaoguxuehui lunwen xuanji*, vol. I (Wuhan: Wuhan Daxue Press, 1987).

107 Ibid.

108 Fang Yousheng. "Shilun Panlongcheng Shang wenhua (On the Shang culture at Panlongcheng)," in Fang Yousheng, ed., *Hubei kaogu xuehui lunwenji* (Wuhan: Wuhan Daxue Press, 1987), 63–69.

109 Hou Dejun, "Shang wangchao shili de nanxia yu jiangnan gutongkuang (The southward expansion of Shang power and ancient copper mines south of the Yangzi River)," *Nanfang wenwu* 1996.1: 81–85.

110 Hubei Provincial Museum and Beijing University, "Panlongcheng yijiuqisi nian tianye kaogu jiyao," 8; Wuhan City Museum 1998; Wang Jin and Chen Xianyi, "Shilun Shangdai Panlongcheng zaoqi chengshi de xingtai yu tezheng, 76.

111 Huangshi City Museum, "Daye guwenhua yizhi kaogu diaocha."

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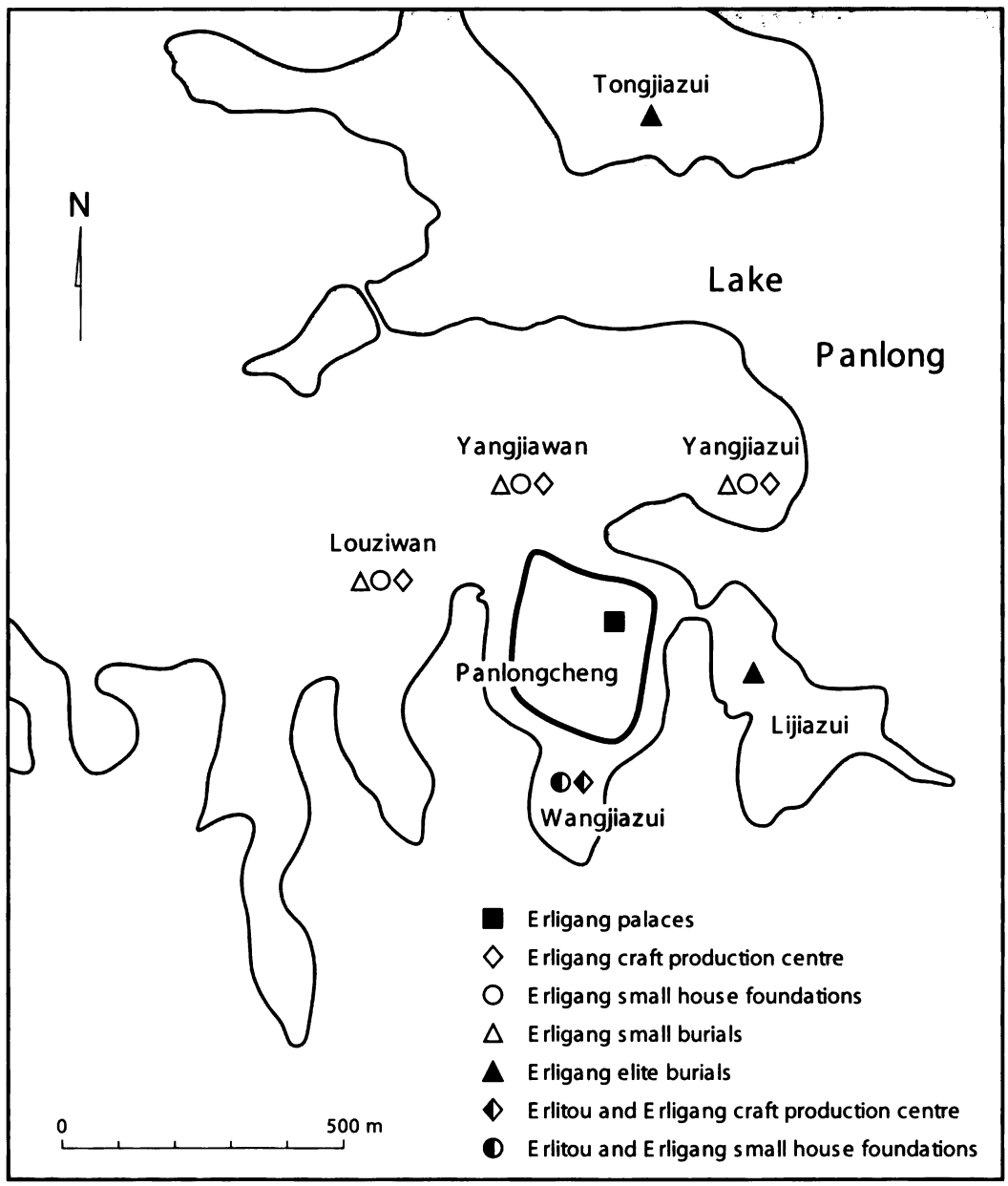

Figure 16. Map of the Panlongcheng Shang town, showing locations of palace, elite burials, residential areas, and craft production centers (redrawn from Wang and Chen, "Shilun Shangdai Panlongcheng zaoqi chengshi," figure 1).

During the Upper Erligang period, settlement patterns and evidence for mining and smelting activities show a different scenario. The construction of the Panlongcheng town walls and the sudden expansion of the Panlongcheng site indicate that a large Shang population may have moved into this region during a short time period. The Panlongcheng town may have been constructed as an outpost by the Shang, facilitating the ultimate goal of Shang expansion to this region—to control copper mines in the south and to transport copper ingots to Shang capital cities

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in the north. This event correlates with abundant evidence for copper mining and smelting activities during the Upper Erligang period at Tongling and several sites in Daye,[112] as discussed above.[113]

Recent studies of lead isotopes suggest that the copper used for casting bronze vessels from the Erlitou site dating to Phases II and III of the Erlitou culture may have been obtained from a single source, which was distinct from those of later periods. On the other hand the ores used in the late Shang period may have been obtained from various locations mostly in southern China.[114] For example, the lead isotopic samples taken from several Shang bronzes from Yanshi and Zhengzhou derived from the southern region of the distribution chart.[115] Likewise, the results of isotopic analysis on twelve bronzes from the Fuhao tomb at Yinxu indicate that the alloy sources were mainly from the Tonglushan area in Hubei.[116] Lead isotopic analyses have not been able to pinpoint the exact locations of the Erlitou metal sources. But there may have been a shift in the provenance of the alloy used for bronze casting from a single source in the Erlitou period to multiple sources, especially from southern China, in the late Shang. This conclusion seems to be consistent with the archaeological evidence for changing foci of copper procurement from southern Shanxi to the Yangzi River Valley, as discussed above.

As the Yangzi River Valley came gradually under the control of Shang forces, the Shang royal court may have become increasingly reliant on copper resources from this region. Some bronzes of late Shang and early Western Zhou bearing inscriptions of Shang royal names have been found near the mining areas of the middle Yangzi region, suggesting that members of the Shang royal lineages may have been sent to the Yangzi River Valley to control the copper resources.[117] One of the motivations for the Shang state to explore copper mines in the south may have related to the higher productivity of southern sources. The copper deposits in Tongling and Tonglushan are shallow or occur on the surface, and are thus easier to mine.[118] Shang miners at Tongling seem to have employed a method combining surface and shallow underground mining.[119] By contrast, in the Zhongtiao mountains shallow deposits of copper are fairly small, referred to as *jiwokuang* (chicken-nest mines) by the locals, which can be empted quickly. Most copper deposits in south-

[112] Huangshi City Museum, "Daye guwenhua yizhi kaogu diaocha."

[113] The three smelting sites in Daye were dated to the Erligang culture, but were not specified to Lower or Upper Erligang in the report (Huangshi City Museum, "Daye guwenhua yizhi kaogu diaocha"). Therefore, it can only be inferred that these sites were dated to, at the latest, Upper Erligang.

[114] Jin Zhengyao, "Erlitou qingtongqi de ziran kexue yanjiu yu Xia wenming tansuo," *Wenwu* 2000.1: 56–64.

[115] Jin Zhengyao et al., "Zhongguo lianghe liuyu qingtong wenming zhijian de lianxi (Relationships between bronze civilizations in the two river valleys in China)," in Institute of Archaeology, ed., *Zhongguo Shang wenhua guoji xueshu taolunhui lunwenji* (Beijing: Zhongguo Dabaikequanshu Press, 1998), 431.

[116] Jin Zhengyao, "Wan Shang Zhongyuan qingtong de kuangliao laiyuan yanjiu (Study of alloy sources of the late Shang bronzes in the Central Plains)," in *Kexue shi lunji* (Hefei: Zhongguo Keji Daxue Press, 1987), 365–86.

[117] Hou Dejun, "Shang wangchao shili de nanxia yu jiangnan gutongkuang," 81–85; Liu Shizhong et al., "Tongling gutongkuang xingzhi tantao (Inquiry into the nature of the ancient copper mines at Tongling)," *Huaxia kaogu* 1997.3: 64.

[118] Hou Dejun, "Shang wangchao shili de nanxia yu jiangnan gutongkuang."

[119] Liu Shizhong and Lu Benshan, "Jiangxi Tongling tongkuang yizhi de fajue yu yanjiu (Excavation and study of the copper mining site at Tongling, Jiangxi)," *Kaogu xuebao* 1998.4: 473–81.

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ern Shanxi are buried deeply underground[120] and are, therefore, more difficult to obtain.[121]

In all copper deposits in the world, surface layers of copper often occur as native copper and oxidized copper minerals, which have high concentrations of copper and are easy to smelt. The secondary enrichment zone below the surface layers provides sulphide ore deposits, which require more sophisticated methods for extracting the metal.[122] The methods for smelting sulphide ore may have been first developed in the mid-Western Zhou period (c. ninth century B.C.) in the Yangzi River region.[123] It is conceivable that the surface layers of oxidized copper deposits in the Zhongtiao Mountains were thin and thus quickly exhausted in the early stage of mining,[124] and that the Shang people had to give up the copper mines in southern Shanxi as they had not mastered the techniques for smelting sulphide ore. The layers of oxidized ore in the middle Yangzi River region, on the contrary, were thicker, and were explored for a much longer time in antiquity.[125] The aforementioned inscriptions on the Rongsheng bell-set also suggest that it was economically more advantageous for the Jin state to produce salt and exchange it for copper than to produce copper locally, or copper supply from the Zhongtiao mountains was insufficient during the Eastern Zhou. This information confirms that the Zhongtiao Mountains ceased to be a major copper source for a long period of time after the early Shang.

It is possible, therefore, that the abandonment of the Shang walled towns along with copper/lead mining activities in southern Shanxi was the result of the lack of metallurgical technology to extract metal from sulphide ore at the time, and of the increasing control of abundant oxidized copper mines by the Shang state in the south. As discussed above, pottery vessels of the Erligang type found in copper mines at Tongling suggest a close affiliation of some miners with areas to the north.

Two different processes of social change are revealed here during the Upper Erligang period. On the one hand, the middle Yangzi River Valley witnessed the construction of the walled town and palaces at Panlongcheng, the increase of population, and the rapid growth of copper mining and bronze metallurgy in this region. On the other hand, southern Shanxi experienced the abandonment of the walled towns and settlements and the decline of copper/lead mining and bronze production at Yuanqu and Dongxiafeng. These may not be independent events but a connected shift of production centers. This situation in the copper mining industry resembles that of salt production, which also shows corresponding development and decline between north Shandong and southern Shanxi.

The dramatic decrease in the number of Shang settlements in southern Shanxi

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[120] Li Baiqin, "Shanxi Pinglu Qianzhuang yizhi qingli jianbao (Brief report of excavation of the Shang site at Qianzhuang in Pinglu, Shanxi)," *Wenwu jikan* 4 (1993): 3–9.

[121] According to Mr. Lü Dacheng, a technician of the Zhongtiaoshan Mineral Company (personal communication, 1999), most shallow deposits of copper were emptied in antiquity, and the present day mines are all situated more than 800 m below the ground level. Many copper mines today are near exhaustion after years of mining, and the copper content in the ore is about 0.5–1 %.

[122] Tylecote, R. F. *A History of Metallurgy* (London: The Metals society, 1976), 8.

[123] Hua Jueming, *Zhongguo gudai jinshu jishu: Tong he tie zaojiu de wenming* (Zhengzhou: Daxiang Press, 1999), 77–80.

[124] Li Baiqin, "Shanxi Pinglu Qianzhuang yizhi qingli jianbao."

[125] Hua Jueming, *Zhongguo gudai jinshu jishu*, 68–69.

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may have been related to some strategic population migration organized by the state, in order to exploit newly controlled resources in the east and south. This is especially clear for the situation in the south. There may have been a great demand for both management and labor in copper mining industries to the south, which were rapidly developed at the time. This demand may have been directed in particular at the people in southern Shanxi, who were experienced in mining and smelting. As these industries were probably state-controlled enterprises, and the labor forces were state-attached, it would have been possible for the state to mobilize the population concerned.

Conclusions

We are not the first to connect the demand for raw material resources with the locations of Shang cities. Kwang-chih Chang has suggested that the major copper supplies in the Shang dynasty may have come from northern China, including southern Shanxi.[126] The strategic importance of southern Shanxi to the early states was also due to its processing of the largest salt resource in the region.[127] The capital cities of early states in northern China may have played an important role in the procurement and protection of copper and tin mines and the transportation of copper/tin ingots.[128] The frequent moves of the capital cities of the Three Dynasties, therefore, "were necessitated by the frequent exhaustion of the copper and tin mines in North China and the consequent incessant chase after new sources of the metal."[129] Our study supports Chang's argument on the general function of early cities. However, based on our analysis of settlement patterns and availability of regional resources, we suggest it was population expansion and the establishment of outposts or fortified towns in peripheral regions by the political centers in the core region, rather than the moving of the capitals, that was the sociopolitical strategy for the acquisition of vital resources (including copper, lead, salt, etc.). This strategy was practiced as early as the Erlitou polity, and continued until the end of the Early Shang.

The acquisition of vital resources seems to have operated on the state level. The states were able to gain a monopoly on procuring and transporting these resources by moving populations into resource-rich regions, constructing outposts in major junctions along transportation routes in these regions, and managing craft production forces. By strategically locating and relocating populations to regions with the best resources available, the states maximized their effectiveness in acquisition of the natural resources. This state-monopolized network for the procurement of raw material characterized the highly centralized political economic system in early states in China.

The environmental conditions in which early states emerged in China are somewhat similar to those in Mesopotamia. In both regions, the resource-poor urban

[126] Kwang-chih Chang, *Shang civilization*, 151–53.
[127] Kwang-chih Chang, "Guanyu Zhongguo chuqi 'chengshi' zhege gainian (On the concept of early 'city' in China)," *Wenwu* 1985.2: 61–67.
[128] Ibid.
[129] Ibid., 367.

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centers depended on the raw material supplies from the peripheries. Nevertheless, the two civilizations appear to be different. It has been argued that the interregional interactions in Mesopotamia were primarily dominated by trade, leading to the formation of "world systems"[130] or "networks of interregional interaction," [131] characterised by economic interdependency between centers and peripheries. However, the relationship between urban centers and peripheral regions in early states in China (from the Erlitou to Early Shang) may have been a one-way military and political domination operated by powerful royal lineages in the capital city. The interregional network, which operated the resource flow, may have been kin-based, rather than purely bureaucratic. The religious and political motivations—such as ancestral worship rituals, divinatory ceremonies, royal hunts, and elite feasting and drinking—were the underlying dynamics for the procurement of copper and the manufacture of bronze objects on a massive scale directly controlled by the state. The processes of resource acquisition, in turn, not only affected demographic change in both central and peripheral regions, but also determined the nature of urbanism.

Our analysis of Erlitou and Shang towns also shed light on understanding of urbanism in ancient China. Wheatley has described early urban centers in China as ceremonial complexes.[132] Our findings however suggest that urban sites in general were political, religious, as well as economic centers, while different cities and towns played different roles in the overall political-economic system. Urbanism was characterized by military control, state-monopolized craft production, urban layouts, formation of a social stratum of state-attached craftsmen, and social class structure based on tributary economic systems rather than mercantile resource procurement during the early Three Dynasties in China.

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[130] See, e.g., Guilermo Algaze, *The Uruk World System* (Chicago: University of Chicago Press, 1993); Philip Kohl, "The use and abuse of world systems theory: the case of the pristine West Asian state," in *Advances in Archaeological Method and Theory* 11 (1989): 1–35.

[131] Gil Stein, *Rethinking World-systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia* (Tucson: University of Arizona Press, 1999).

[132] Paul Wheatley, *The Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City* (Chicago: Aldine Publishing, 1971), 47.

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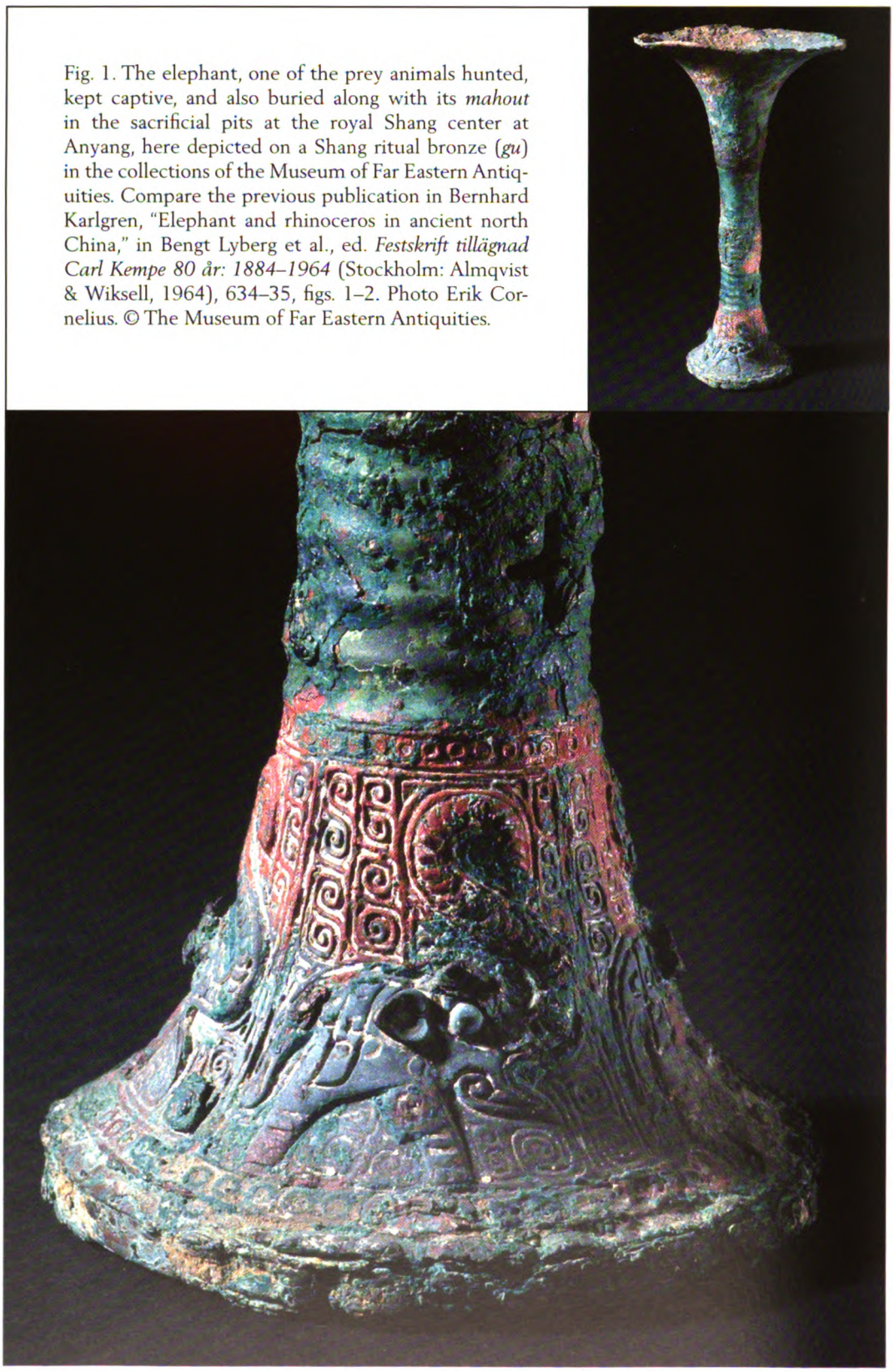

Fig. 1. The elephant, one of the prey animals hunted, kept captive, and also buried along with its *mahout* in the sacrificial pits at the royal Shang center at Anyang, here depicted on a Shang ritual bronze (*gu*) in the collections of the Museum of Far Eastern Antiquities. Compare the previous publication in Bernhard Karlgren, "Elephant and rhinoceros in ancient north China," in Bengt Lyberg et al., ed. *Festskrift tillägnad Carl Kempe 80 år: 1884–1964* (Stockholm: Almqvist & Wiksell, 1964), 634–35, figs. 1–2. Photo Erik Cornelius. © The Museum of Far Eastern Antiquities.

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Rising From Blood-Stained Fields: Royal Hunting and State Formation in Shang China

by

Magnus Fiskesjö

. . . my taste for these violent pleasures has greatly abated. Even here in Tibur, however, the sudden bark of a stag in the brush is enough to set trembling within me an impulse deeper than all the rest, and by virtue of which I feel myself leopard as well as emperor.[1]

[1] The elderly Emperor Hadrianus, in Marguerite Yourcenar's *Memoirs of Hadrian* (New York: Noonday, 1990), 6.

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1. Introduction, with an overview of sources

The obsession with hunting on the part of the Shang dynasty kings, famously reported from ancient Chinese history, has long been explained, and condemned, as decadent luxury. The purpose of this article is to challenge this long-standing, still widely accepted but really fundamentally flawed traditional view, by investigating the actual evidence and suggesting an alternative. The article sets forth the view that the royal hunt, as a form of dangerous leisure, served as an intentionally conspicuous, grandiose risk-taking, simultaneously used to build and cultivate an image of control and physically incorporating the surrounding wilderness, thus expanding the domain and the charge of the Shang king and his archaic state in a dynamic process of "domestication" that is central to state formation.

On this view, the royal Shang hunting expeditions embody the very process of organizing and shaping the fledgling Bronze Age monarchical state in relation to its surroundings. While this royal form of "consumption beyond utility"[2] obviously also carried instant, concrete rewards (harvested game for the royal kitchen, the perfection of martial arts, and so on), the answer to why the kings of the late Shang dynasty should have been so obsessively and personally interested in risky hunting expeditions is to be sought in how these expeditions and the hunting of wild animals—and of wild people—helped establish the king as king. Put otherwise, the "utility" of the hunt, if we choose to stay with such terms, must be sought in the very process of cultivation of monarchical status and power.

The traditional explanation of the hunt as decadent sport is as unsatisfactory as are, ultimately, all of the other more recent explanations which typically seek to isolate some sort of plain utility or immediate practical reason behind it. Some indicate that the great expenditure of effort involved served as a form of military exercise which would have its practical utility by "paying off" in times of war; others have seized upon the possibility that this was a supplementary subsistence activity supplying meat to the royal kitchen; and so on. Neither altogether incorrect, nor mutually exclusive, these partial explanations in effect fail to address the central symbolic "utility" of the royal hunt in the dynamic context of its time. All of this begs the question anew.

The Shang royal hunt is no latter-day invention: It has been amply confirmed both in the historical and archaeological record of the late Shang kings (ca. 1200–1045 BCE), notably their oracle bones, an archive of sorts of the last of these kings, uncovered in the large-scale excavations under way since the early 20th century at the Shang ruins at Anyang, in what is now northern China. The Shang warrior-farmer dynasty, an emerging "Bronze Age theocracy,"[3] drew sustenance for its immediate

[2] Georges Bataille, *The Accursed Share* (New York: Zone Books, 1988–93), II, 197, ff.

[3] This term is borrowed from Keightley, "The late Shang state: When, where, and what?" in Keightley, ed.: *The Origins of Chinese Civilization* (Berkeley: University of California Press, 1983), 523. Exact dates for the Shang dynasty, about 1600/1570–1045 BCE, have been much debated; the date of the demise has recently been recalculated as 1045 BCE. For a review, see Wang Yuxin et al., *Jiaguxue yibai nian* (Peking: Shehui kexue wenxian, 1999), esp. ch. 5, 11; Keightley, *Sources of Shang History*, 171–75, 227 table 37, 228 table 38; and "The Shang: China's first historical dynasty," in Loewe and Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* (Cambridge: Cambridge University Press, 1999), 247 ff. See too the introduction to the archaeology of Shang hunting, below (2.1).

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subsistence mainly from food produced in settled agriculture: millet grown in rain-irrigated fields, and also cattle, pigs, sheep, dogs, and other domestic animals, supplemented by fishing, and hunting.[4] The kings, who must be imagined as constantly struggling with capricious natural forces and hostile enemies, persistently engaged ritual specialists, or "diviners," to carry out pyromantic oracle divinations. The immediate, overt intention was to probe the influence exerted by various gods, especially ancestor spirits,[5] on the affairs of the living, and determine what course of royal action might be auspicious. The main media used came from domestic animals: bovine scapulae (i.e. cattle shoulder blades), or turtle shells. These were heated up to cause cracks to form and sound, which were then interpreted, and recorded, using inscriptions. Royal divination concerned sacrifices to ancestors and other deities; the weather or the harvest; hunting and warfare; combinations of the above, or other topics like the generalized recurring dangers hidden in every coming night or week; the king's illness; royal childbirths; and so on. Divination was a very prominent and labor-intensive activity,[6] a daily preoccupation which actively involved the king himself. It was not invented by the Shang kings, but instead built on long traditions predating the Shang and persisting not just with the king and his court, but beyond their sphere of influence, and also within other Shang social strata.[7] The texts found on the stored "oracle bones" come, however, almost exclusively from royal divination at the court. Admittedly, they are not only severely constrained in both scope and outlook, but often obscure, or fragmented. By today, however, a full century of paleography scholarship has realized their potential as one of the major sources of knowledge about the Shang. Their discovery, some aspects of which I will mention later on, transformed the Shang from a diffuse presence in transmitted

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4 On Shang agriculture, see Hu Houxuan, "Buci zhong suo jian zhi Yin dai nongye," *Qilu daxue guoxue yanjiu zhuankan: Jiaguxue Shangshi luncong xuji*, Pt. 1 (1977); Chen Mengjia, *Yinxu buci zongshu* (Peking: Zhonghua, 1988 [1956]), 523–49, 636–37; Zhang Bingquan, "Yindai de nongye yu qixiang," *Bulletin of the Institute of History and Philology* 42 (1970), 267–336; Chang Kwang-chih, *Shang Civilization* (New Haven: Yale University Press, 1980), 220–30; 236; also Qiu Xigui, "Jiaguwen suo jian de Shangdai nongye," *Yindu xuekan zengkan* (1985), 198–244; Keightley, *The Ancestral Landscape*, ch. 2, and p. 111; "The Shang: China's first historical dynasty," 277 ff.

5 For a summary of the Shang pantheon, divided on ancestral spirits and other deities in an evolving hierarchy (reflecting, of course, the growth and development of the monarchical state on the ground), see Keightley, "The Shang: China's first historical dynasty," 251–62.

6 Keightley (*Sources of Shang History*, 89) estimated the daily investment to 50 man-hours.

7 Uninscribed divinatory bones and shells, presumably for everyday use, have been found in lower-status residential areas around Anyang. The 1991 cache of inscribed oracle bones found at Huayuanzhuang, Anyang, included some where the divination was not just carried out but presided over by someone other than the king; other Shang divination inscriptions not immediately concerned with the royal family's affairs include those made by the Wu-diviner group in Period I as well as the non-divinatory "trophy" records (see 2.2.1; 3.2.3) and genealogies of Shang kings, writing practice exercises on bone fragments, records of royal gifts made on bronzes, etc. A few brief inscriptions on Shang bronzes also refer to hunting, such as the Zai X *gui*, which uses a royal hunt to indicate the temporal context of the occasion of the casting of the vessel ("The king came from having hunted..." [*shou*, here clearly used with the additional meaning of "inspecting", see Yang Kuan, *Gu shi xin tan*, 265]). There may have existed other forms of writing or records on perishable media, that have not survived. See too Liu Yiman, "Kaoguxue yu jiaguwen yanjiu," *Kaogu* 1999.10, 2; Anyang work team, "1991 nian Huayuanzhuang dongdi, nandi fajue jianbao" *Kaogu* 1993.6, 499. For a general discussions of the history of divination in China, see R.J. Smith, *Fortune-Tellers and Philosophers: Divination in Traditional Chinese Society* (Boulder: Westview Press, 1991); on the Shang period and the transition from Shang to Zhou, esp. 14–19; and also Michael Loewe, "China," in M. Loewe and C. Blacker, eds., *Oracles and Divination* (Boulder: Shambala, 1981), esp. 40–42, fig.1, 41; and "Divination by shells, bone and stalks during the Han period," *T'oung Pao* 74 (1988), 81–118.

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texts to a new status as the earliest Chinese historical dynasty,[8] and many scholars have worked on their decipherment, and dating.[9]

The existence of the Shang royal hunting expeditions and their great importance might well have remained unknown without the oracle bones.[10] Royal hunting is revealed as a frequent topic—more than one-tenth of over known 100,000 known inscriptions.[11] The kings and their associates probed the auspiciousness or suitability of choices of hunting destinations, the choice of companions, the timing, and so on. The inscriptions sometimes even included the results of the action taken, in "verifications"[12] listing the various animals captured. This forms the crucial bridge to the physical remains recovered in archaeological excavations. While archaeological materials offer insights that could never have been obtained from the inscriptions alone, the remains of the hunted prey, as well as the other victims of hunting, sacrifice, and slaughter, both animal and human, can be systematically compared with the written record.

Connecting the two most important intertwined sources with direct bearing on the Shang circumstances (the oracle bone inscriptions, and the archaeological discoveries at Anyang[13]), is a central aim here. Since Shang archaeology is a distinctly historical archaeology, our inquiry into the significance of the Shang royal hunt must obviously strive to make these two types of data inform each other. These sources should, morever, always be placed in their proper context: not only should they be placed within the fragmented history of the recovery of remains in our times, and,

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8 Already Confucius had complained of the lack of sources on the Shang, which shows that already in his times, the oracle bone inscriptions had been forgotten.

9 Dating depends on writing style, overlapping sequences of groups of diviners, the records of offerings to royal ancestors, etc., determining the succession of kings. The obtained sequence is used to date archaeological remains in turn (see above, 2.1). The most widely cited periodization has been Dong Zuobin's five-period system, which in turn is being refined and modified. For example, some Period IV inscriptions are now understood to belong to or even predate Period I. See, *inter alia*, Laura A. Skosey, "Lin Yun's 'The Xiaotun nandi excavation and the periodization of Yinxu oracle bones' in *Guwenzi yanjiu* No. 9, January 1984, 111–54," M.A. thesis, University of Chicago, 1987; Li Xueqin et al., *Yinxu jiagu fenqi yanjiu*; Wang Yuxin et al., *Jiaguxue yibai nian*; Keightley, "The Shang: China's first historical dynasty," 247–51.

10 Indeed, "it had always been known to the Chinese literary world that the Sovereigns of the dim Shang-Yin line were devoted followers of the chase, but until the beginning of the present century, none knew or had any reason to suspect that records of such hunting expeditions were still in existence. But they were..." L.C. Hopkins, "Records of David's deer as hunted by Shang-Yin sovereigns," *Journal of the Royal Asiatic Society of Great Britain and Ireland* (1939), 424.

11 Han Feng, "Gudai xunshou zhidu de shiji ji qi tu'anhua," *Zhongguo shi yanjiu*, 1990.3, p. 40, citing an unpublished paper by Chen Weizhan. Also see the latters' recent book, *Jiaguwen tianlie keci yanjiu* (Nanning: Guangxi jiaoyu chubanshe, 1995, 1). A figure of one-ninth or more of the total is suggested by Meng Shikai, "Yin-Shang shidai tianshou huodong de xingzhi yu zuoyong," *Lishi yanjiu* (April, 1990), 96. Keightley (*Sources of Shang History*, 165–70) notes the difficulties of assessing to what extent the recovered oracle bones actually represent a representative sample of the total number used in divinations. On such difficulties, see too below.

12 For more on the structure of inscriptions, see below, 3.1.

13 Since the 1950s, Shang-period archaeology has expanded far beyond Anyang, locating regional interconnections and a whole series of contemporary Bronze Age polities across the East Asian mainland. On Shang archaeology beyond Anyang, see Robert Bagley, "Shang archaeology," in Loewe and Shaughnessy, eds., *The Cambridge History of Ancient China*, 132 ff. While the Shang were clearly one of many polities within an interconnected dynamic web of early states, Shang Anyang is as the most important known center within the long-standing general trends towards centralization in north and east central China. The fact that most oracle bone inscriptions have been recovered from Anyang is but one aspect (news reports in April 2003 mention the discovery of late Shang inscribed oracle bones at Daxinzhuang, Shandong Province).

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obviously, within the contemporaneous Shang-era socio-historical context, but we should also "cast a wider net" not just around animals *per se*, but also (to anticipate, once again, the final discussion) try to capture the larger context of the uses of the wild, of the "domesticated" animals, and of people.

There are several other potential sources of information. These include visual renderings of animals and people in the shape of decoration on objects such as the bronze ritual and funerary vessels, to which I will also refer occasionally. The representations of various animals are often life-like and powerful. Examples from the Anyang center have been regarded as more stylized, and Southern examples more naturalistic.[14] No Shang pictorial renderings of hunting itself have been preserved,[15] so there are no immediate sources for iconographic studies of hunting as such in the Shang period (except as inferred from elements of the Shang writing system[16]).

The Classical texts, which postdate the Shang, are above all important not as direct sources but as the basis of the traditional Chinese condemnation of the Shang royal hunt as wasteful and degenerate. These texts may be useful as sources of com-

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[14] Bagley, "Shang archaeology," 210–11, etc. The representation of animals in artistic renderings on prestige goods has been correlated generally with the emergence of the early state, as in the Mesoamerican examples cited by, for example, Charles Spenser ("on the tempo and mode of state information," *Journal of Anthropological Archaeology* 9.1, 1990, 1–30). This is an aspect of Shang royal signification that I have left out almost entirely here. For more discussion of animal life, royal signs and bronze imagery in the Shang period, see Hayashi Minao, *In-Shù jidai seidôki monyô no kenkyû* (Tokyo: Yoshikawa Kôbunkan, 1986), Vol. 1, 120–25, 157–58, Vol 2., 102–103, etc.; and the further references cited by Keightley, *The Ancestral Landscape*, esp. 109–111 and 110 n. 43; including Li Ji, "Hunting records, faunistic remains and decorative patterns from the archaelogical site of Anyang," *Guoli Taiwan daxue Kaogu renlei xuekan* 9–10 (1957), 10–20; K.C. Chang, "The animal in Shang and Chou bronze art," *Harvard Journal of Asiatic Studies* 41.2 (1981), 527–54; *Art, Myth, and Ritual. The Path to Political Authority in Ancient China* (Cambridge: Harvard University Press, 1983), 56–80; also see E. Childs-Johnson, "The metamorphic image: A predominant theme in the ritual art of Shang China," *BMFEA* 70 (1998), 5–171.

[15] Pictorial depictions of hunting outside of the writing system are preserved only from periods after the end of the Shang era, in the last part of the Zhou 周 dynasty (Eastern Zhou, c. 770–221 BCE); see, for example, Xu Zhongshu, "Gudai shoulie tukao," in *Qingzhu Cai Yuanpei xiansheng 65 sui lunwenji* (Peiping: Academia Sinica, 1935, Vol. II, 569–617); Mary H. Fong, "The origin of Chinese pictorial representation of the human figure," *Artibus Asiae* 49.1–2 (1988/89), fig. 7, 10–12, and 14; Charles D. Weber, "Chinese pictorial bronzes of the Late Zhou period," Part III, *Artibus Asiae* 29.2–3 (1967), 137–73; Michael Loewe, "Man and beast. The hybrid in early Chinese art and literature," *Numen* 25.2 (1978), 97–117; Song Zhaolin, "Zhanguo yishe tu ji qi suyuan," *Wenwu* 1981.6, 75–77; etc. Such representations could of course have existed even in the Shang, perhaps on perishable material such as wood or cloth. But it seems unlikely that such a "genre" existed since no trace has been found, not even in the wood carvings reconstructed from traces in the soil of Shang royal tombs (see below, 2.2.2, on such traces; one example illustrating what might be a tiger is found in K.C. Chang, *Shang Civilization*, 116, fig. 34, from Umehara Sueji, *Inbo hatsugen makki in'ei tzuroku*, Kyôto: Benridô, 1959).

[16] The characters of the oracle bone inscriptions themselves often include suggestive pictorial representations, on which more below (3.2). They are mostly highly stylized and actually function as more or less arbitrary signs within a sophisticated writing *system*. Even when they "depict" something (such as when a "foot" combined with a "pig" is used for the meaning of "pursue") they are not primarily pictorial representations. On Shang writing as a system, see Keightley, "The origins of writing in China: Scripts and cultural contexts," in W.-M. Senner, ed. *The Origins of Writing* (Lincoln: University of Nebraska, 1989). The very position of writing in its social context as an exclusive tool is, in itself, also highly significant, far beyond beyond its presence as mere sources of event chronology. As noted by Diane M. O'Donoghue, if we were to define early writing "exclusively as *that which records*, we fix this system of representation within a singular place and therefore foreclose the possibility of examining other levels of meaning that may have motivated its creation and affected its reception," in "Critical Distance: Replacing the practice of Chinese art history," *Journal of East Asian Archaeology* 2, 1–2 (2000), 333. On the place of writing in Shang society see too Redouane Djamouri, "Écriture et divination sous les Shang." In Karine Chemla et al., ed. *Divination et rationalité en Chine ancienne. Extrême-Orient, Extrême-Occident* 21 (1999), 11–35.

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parative information on ritualized hunting in later times, including also in imperial (Han) China, but they must be treated with suspicion since they are twice removed from the Shang context. They are not only composed in a different cultural context but heavily colored by later views, including the Classical Chinese justification of the Zhou conquerors' destruction of their Shang predecessor, and particularly in this relation they have been constantly re-edited and embellished throughout subsequent history.[17] While recognizing the comparative interest of these texts, as with materials on royal hunting orgies worldwide (on which more below, in the conclusions), we should refrain from using such texts as direct sources. I will refer to Classical texts occasionally and discuss certain continuities and discontinuities in the conclusions.

Insights can also be drawn from the uses of hunting elsewhere in the world (which I barely hint at in this article, only suggesting, in the conclusions, some useful directions for further inquiry), and in other times. Looking back into regional prehistory, there are a number of continuities and parallels. The main differences between the Shang and the preceding polities of the region lie in the increased scale of social organization and social complexity accompanied by the monopolization of violence, the enormous investments in bronze use, and writing. But pyromantic divination using turtle shell and bone was not new; it is known already from the preceding Neolithic, including Longshan 龍山 cultures. Other aspects of demonstrable continuity from prehistoric times include the keeping of domesticated animals, such as cattle, pig, dog, alongside the consumption of wild animals; agricultural tools and methods; ceramic styles; and mortuary rituals, even in the continual construction of elite burials with wooden coffins in stepped pits. Very little is known, however, of the status-differentiated aspects of hunting in prehistoric societies,[18] and I will

[17] The most famous of the Classical accounts setting the tone for the condemnation of the Shang are found in the chapters of the Zhou-era *Shangshu* 尚書. (See Bernhard Karlgren, *The Book of Documents*, Stockholm: Museum of Far Eastern Antiquities, 1952), believed to date back to the early Western Zhou. This account defines and justifies the Zhou victory over the Shang as a decadent regime, and is enshrined in the early imperial-era account of Shang history in the "Yin ben ji" ("Basic account of the Yin") of Sima Qian's (Han dynasty) *Shiji* 史記 (*Records of the Historian*). For alternative accounts of this orthodox Classical Chinese version of a righteous Zhou conquest, compare the version "rescued" from the *Yi Zhou Shu* which describes these events as an orgy of violence. It is discussed in Gu Jiegang's seminal article, "*Yi Zhou Shu* 'Shifu pian' jiaozhu xieding yu pinglun," *Wenshi* 2 (April, 1963), 1–42, and by Edward L. Shaughnessy, "'New' Evidence of the Zhou Conquest," *Early China* 6 (1981–82), 57–79; also by M. Fiskesjö, "Celebrations of military victories in the Western Zhou period" (ms.). In the *Yi Zhou Shu*, the conquest, in ca. 1045 BCE, is described as a violent war of conquest which along with the Zhou hunting orgy after the victorious conquest is censored from sanitized later accounts (including the *Mencius*' account; see n. 429). This post-war hunting frenzy also finds echoes in various other references to hunting in the Zhou-era, including in the *Shijing* 詩經 (B. Karlgren, *The Book of Odes*) and later, such as in the *Zuozhuan* 左傳. On the dates of these early texts, see Michael Loewe, ed., *Early Chinese Texts: A Bibliographical Guide* (Berkeley: The Society for the Study of Early China, 1993). Sources on post-Shang hunting also include Zhou bronze inscriptions; to which I will refer occasionally, Zhou oracle inscriptions; and the inscriptions on Qin stone drums, on which see Gilbert L. Mattos' monograph *The Stone Drums of Ch'in* (Nettetal, Germany: Steyler Verlag, 1988), devoted to textual criticism and dating, not interpretation. Royal hunting becomes imperial hunting in the early Chinese empires, and quite different in nature when compared to the Shang. I return to these developments in the concluding discussion.

[18] Chang Kwang-chih, *Shang Civilization*, 285, 340 ff.; and Chang, *The Archaeology of Ancient China* (New Haven: Yale University Press, 1986), esp. 362–65; see too Bagley, "Shang archaeology." On the long prehistory of agriculture and domesticated animals in northern China, see, for example, Yan Wenming, "Origins of agriculture and animal husbandry in China," in C. Melvin Aikens et al, eds. *Pacific Northeast Asia in Prehistory: Hunter-fisher-gatherers and Sociopolitical Elites* (Pullman, Washington: Washington State University Press, 1989), 113–23.

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concentrate on the Shang, some of the discernible trends and developments that have a particular bearing on the interpretation of the Shang royal hunt will be also mentioned in the conclusions.

The immediate sources for this inquiry into the royal Shang hunt remain the archaeological remains and the Shang oracle bone inscriptions—and, not least, the work done on this and related topics by other scholars.[19]

Part 2, below, is a review of the "ground truth," the remains of animals and other related items used or consumed by the Shang: the remains of waste and refuse from the consumption of food items; grave offerings; as well as offerings of animals and people in sacrifice. While highlighting some of the limitations and problems that still afflict the archaeological record, I will also seize the opportunity to suggest renewed research agendas which could remedy some of these problems by elevating the study of Shang-era biological remains to the level of serving cultural analysis.

Part 3 is a review of information on the royal hunt found in the oracle bone inscriptions. I outline certain general features of the hunting inscriptions, examine several key aspects (again cataloguing the victim species, in section 3.2.3). Changes over time and other trends in the oracle bone record, like the crucial implications of the archaeological record, will be discussed in the conclusions.

Part 4 presents and questions the various views on the nature and role of the Shang royal hunting expeditions that have been put forward so far, mainly by Chinese scholars.

Part 5 concludes with my own discussion of what the information we have gathered can tell us about the role of the hunting expeditions, including as a means for building up the Shang king's position of power.

2. The archaeological remains

2.1 Overview of Anyang archaeology

Because of the intense curiosity focused on the "Yin Ruins" 殷墟 near Anyang 安陽 on the part of Chinese historians, early Chinese archaeology came to focus on

[19] Previous studies addressing aspects of the Shang royal hunt, notably as reflected in oracle bone inscriptions, include Dong Zuobin, "Huo bai 'lin' jie," in Li Ji, ed. *Anyang fajue baogao* (Peiping: Academia Sinica, 1929), Vol. 2, 287–335; Chen Mengjia, *Yinxu buci zongshu* (Peking: Zhonghua, 1988); Huang Ranwei, "Yin wang tian lie kao," Pt. I-III, *Zhongguo wenzi* 14–16 (1964–65); Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi kaoding yu bianxi," *Guwenzi yanjiu* 18 (1992), 45–61; and his recent book, *Jiaguwen tianlie keci yanjiu* (Nanning: Guangxi jiaoyu, 1995); also Li Xueqin, *Yindai dili jianlun* (Peking: Kexue, 1959); Matsumaru Michio, "Yinkyo bokujichû no denryôchi ni tsuite—Indai kokka kôzô kenkyû no tame ni," *Tôyô bunka kenkyûjô kiyô* 31 (1963), 1–163; Zhong Bosheng, "Buci zhong suo jian Yin wang tianyou diming kao: jian lun tian you diming yanjiu fangfa" (National Taiwan University, Taipei, 1972); Hsü Chin-hsiung, *The Menzies Collection of Shang Oracle Bones* (Toronto: Royal Ontario Museum, 1977); Huang Qingxin, *Yindai tianlie yanjiu* (Taipei: National Taiwan University, Institute for Chinese literature, 1977); Yao Xiaosui, "Jiagu keci shoulie kao," *Guwenzi yanjiu* 6 (1981), 34–66; Meng Shikai, "Shangdai tianlie xingzhi chutan," in Hu Houxuan, ed., *Jiaguwen yu Yin-Shang shi*, Vol. 1 (Shanghai: Shanghai guji/Sanlian, 1983), 204–24; and "Yin-Shang shidai tianshou huodong de xingzhi yu zuoyong," *Lishi yanjiu* (Apr. 1990), 95–104; Yang Shengnan, "Yinqi buci 'tian' zi shuo," in Sichuan daxue lishi xi, ed. *Xu Zhongshu xiansheng jiushi shouchen jinian wenji* (Chengdu: Bashu, 1990, 53–71); also see David N. Keightley, *The Ancestral Landscape: Time, Space, and Community in Late Shang China (ca.1200–1045 B.C.)* (Berkeley: University of California Press, 2000), and *Sources of Shang History: The Oracle-Bone Inscriptions of Ancient China* (Berkeley: University of California Press, 1978; and Wang Yuxin and Yang Shengnan, *Jiaguxue yibai nian* (Peking: Shehui kexue wenxian, 1999), esp. chapters 11–13.

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this area, riding high on a wave of nationalist interest in confirming the historical reality of the Shang dynasty and extending national history further back in time.[20] Finding Shang dynasty oracle bones *in situ* was the top priority, but a long series of other, unexpected discoveries followed, above all the architectural remains of a Shang royal center.[21] The thousands of oracle bone found have for the most part been unearthed in association with these building remains, often as caches placed in so-called "ash pits" constructed for storage, and also in some cases containing both animal and human skeletal remains. Burials have also been found in large numbers, either in cemeteries or in "sacrificial pits" containing humans, animals, or material artifacts: weapons, tools, ceramics, bronzes, figurines, etc. Some items, like the horse-drawn chariot, indicated long-distance borrowing, ultimately from Western Asia. Last but not least, a series of now-famous large-scale tombs of the late Shang kings were also found. These Anyang remains were once a Shang dynastic capital, probably corresponding to the "Yin" of later (Zhou-inspired) literature.[22] Proto-"capitals" such as this apparently only first emerged towards the end of the Shang period. According to Sima Qian's *Shiji* (second century BCE)[23] and other texts (see n. 15), the Shang previously had no "fixed" capital and moved the seat of their dynasty seven times before finally settling at Anyang.[24] It is widely acknowledged that the Anyang palace remains and royal tombs of kings indeed represent such a more fixed-site capital site, as suggested by Sima Qian. Indeed, the 20th-century combined discoveries at the Anyang sites prove that this area constituted if not a grand "capi-

[20] Chinese field archaeology until this time had focused on prehistoric finds, which could not immediately be related to historical texts in the same manner. On the historical setting, see also K.C. Chang, *The Archaeology of Ancient China* (New Haven: Yale University Press, 1986), L. von Falkenhausen, "On the historiographical orientation of Chinese archaeology," *Antiquity* 67 (1993): 839–49, and Robert Bagley, "Shang archaeology," in *The Cambridge History of Ancient China*, 124–231. Classical Chinese texts (notably the chapter on Shang history in Sima Qian's *Shiji*) said the Shang kings starting with Pan Geng 盤庚 had ruled from a new, fixed capital city at "Yin 殷" widely regarded as an early direct ancestor to latter-day "Chinese" polities.

[21] For the background, see Li Ji, *Anyang* (Seattle: University of Washington Press, 1977), 3–48 (and for the early organization of the Anyang excavations esp. 49 ff.). Anyang and Shang archaeology is summarized in K.C. Chang's *Shang Civilization* (New Haven: Yale University Press, 1980); for post-war Shang archaeology see Institute of Archaeology, *Xin Zhongguo de kaogu faxian he yanjiu* (Peking: Wenwu, 1984), 225 ff.; also Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," *Kaogu* (1988.10), 929–41; Institute of Archaeology, *Yinxu de faxian he yanjiu* (Peking: Kexue, 1994); Bagley, "Shang archaeology;" and Yang Baocheng, "Yinxu fajue chengguo yu zhanwang," *Jianghan kaogu* 1999.1, 38–43.

[22] "Yin 殷" is used in Zhou texts when referring to the Shang and is therefore often still used by Chinese and Japanese scholars in lieu of the native "Shang 商". I generally use " Shang."

[23] "[Sima Qian] was...the first archeologist of China" (Cheng Te-kun, *Archaeology in China*, Vol 2: *Shang China* [Toronto: University of Toronto press, 1960], xvi); apparently even visiting the Shang ruins personally while researching his monumental *Shiji*. — Some inscriptions suggest that another "Great city of the Shang" [Da yi Shang] may have been located southeast of Anyang, at present day Shangqiu (Keightley, *Sources of Shang History*, xiv n. 6; "The late Shang state: When, where, and what?," 532 ff.). The search continues, including under the leadership of the director of the Anyang work team, Tang Jigen, who is also redefining Shang periodization. See Tang Jigen, "Zhong Shang wenhua yanjiu," *Kaogu* 1999.4, 393–420; "New discoveries at Anyang, capital of Bronze Age China," presentation of April 7, 2001; Institute of Archaeology and the University of Minnesota Archaeology Laboratory, "Anyang Huanhe liuyu quyu kaogu yanjiu chubu baogao," *Kaogu* 1998.10, 13–22; Tang Jigen et al. "The largest walled Shang City located in Anyang, China," *Antiquity* 74 (2000), 479–80; and the most recent report by the Anyang work team, "Huanbei Shangcheng de kaogu xin faxian," in *Zhongguo shehui kexueyuan Gudai wenming yanjiu zhongxin tongxun* 5 (2003), 54–62.

[24] The apparent itinerant nature of Shang kingship has been taken as an indication that the Shang originally relied more on herding and their economy became more permanently inclined towards settled agriculture only after settling at Anyang. This is possible; it has not yet been substantiated by zooarchaeological or other research.

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tal" in the manner of later periods, then clearly an important center, actively used in the 150 years or so immediately preceding the demise of the Shang dynasty, in about 1045 BCE. While relatively few dwelling structures have been found, extensive bronze and bone workshops have been located within and near the palace area. Simplistic labelling or divisions of the remains as "religious" vs. "economical" spheres are clearly unworkable, and facile sacred/secular dichotomy that may not fit Shang times should be avoided. Still, the late Shang center at Anyang had a heavy emphasis on ceremonial and mortuary aspects. The increasing concentration and monopolization of resources,[25] not least the clear indications that the center embodied a trend toward more permanent royal establishments, are all highly significant for our topic.

At present, four different strata are generally discerned within Anyang cultural deposits: Prehistoric (mainly Neolithic Longshan pottery and associated remains); Pre-dynastic Shang; Dynastic Shang (i.e. from when Anyang became an important center and until the dynasty ended); and Post-Shang. Obviously, archaeologists active in Anyang field research will proceed with refining the dating of Shang remains, but this is still the general framework for the division of Shang dynasty deposits into four archaeological "Yinxu culture periods," derived primarily from the pottery sequence and correlated with other artifact sequences.[26] Period 1 corresponds roughly to the reign of Wu Ding 武丁, a very active hunter-king. Much of our knowledge about his reign comes from an important corpus of oracle turtle shells, recovered in 1936 from the famous YH127 pit, ca. 17,000 turtle shell fragments (2/3 of all pre-war finds), many of with hunting inscriptions. The contents of these and other oracle bone inscriptions also confirm that they themselves were generally deposited in the period from about the reign of Wu Ding and up to the end of the dynasty,[27] and I generally accept these weighted conclusions made by excavators and scholars on periodization and on the general provenience of reported objects and remains as belonging to the dynamic last part of the Shang

[25] See Liu Li and Chen Xingcan,"Cities and Towns: The Control of Natural Resources in Early States, China," this volume.

[26] Including those of the five oracle-bone inscription periods, as well as bronzes, and bone hairpins. The work on dating and periodization was begun by Liang Siyong, Dong Zuobin, Li Ji, etc. The classical definition of the pottery sequence is Li Ji, *Yinxu qiwu jiabian: Taoqi shang pian*, 1956 (see too K.C. Chang, *Shang Civilization*, 105–106; for illustrated pottery sequence, 107) and, more recently, Tang Jigen, "Zhong Shang wenhua yanjiu," etc. On dating and periodization, and on the interrelationship of archaeological and inscriptional data, see too Li Xueqin and Peng Yushang, *Yinxu jiagu fenqi yanjiu* (Shanghai: Shanghai guji, 1996); Keightley, "The Shang: China's first historical dynasty," 240–42; Liu Yiman, "Kaoguxue yu jiaguwen yanjiu," Ch'en Fang-mei, "Some thoughts on the dating of Late Shang bronze weaponry," *Journal of East Asian Archaeology* 2, 1–2 (2000), 227–50; Yang Baocheng, "On periodization of the Yinxu culture," *Chinese Archaeology* 1 (2001), 45–46; etc.

[27] Some periodizations allowing for the initial use of the Anyang sites to have begun before Wu Ding. Period 1 sometimes includes the two kings who preceded Wu Ding (Pan Geng and Xiao Xin), or even the pre-dynastic Shang; Wu Ding's reign is sometimes believed to have occurred even later (cf. K.C. Chang, *Shang Civilization*). Recent syntheses of Anyang archaeology relate period 1 to king Pan Geng's reputed move of the capital, through the early part of Wu Ding's reign; period 2 to late Wu Ding through Zu Geng and Zu Jia; period 3 to Ling Xin [Fu Xin]/Kang Ding/Wu Yi/Wen Ding, and period 4 to Di Yi and Di Xin (i.e. Zhòu, the last Shang king, overthrown by the Zhou), cf. Zheng Zhenxiang, "Lun Yinxu wenhua fenqi ji qi xiangguan wenti," in *Zhongguo kaoguxue yanjiu. Xia Nai xiansheng kaogu wushi nian jinian lunwen ji* (Peking: Wenwu, 1986), 116–27; and her "Yinxu fajue liushi nian gaishu" (1988). For a tabulation of the traditional Yin/Shang genealogy in Sima Qian's *Shiji* and those reconstructed from oracle bone inscriptions, see K.C. Chang, *Shang Civilization*, 6 ff., 167–70; Keightley, "The Shang," 234–35.

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dynasty, including excavated animal remains, and differentiating mostly only "early" and "late" within the late Shang period[28]—except where I take issue with specific aspects, or relate hunting expeditions with temporal trends.

Animal and human skeletal remains at Anyang mainly come from excavations in the vicinity of Xiaotun 小屯 village, in 1928–37, then interrupted by the Japanese war. The excavated objects were moved several times, and some were lost, including much or most of the skeletal remains. What remained was taken to Taiwan in 1949, where several senior investigators eventually published reports from the first 15 seasons.[29] Excavations restarted in 1950, and continue to this day under the auspices of a permanent research station.

2.2 Animal and human remains in the context of Anyang archaeology

The main sources for information on Anyang remains are the following archaeological reports:

A Four volumes of preliminary reports from 1929–33 (Li Ji, ed. *Anyang fajue baogao*, published in Peiping, or Peking, and Shanghai);

B The large set of reports from the Xiaotun area (Shih Chang-ju et al., *Xiaotun yizhi de faxian yu fajue*, 1959- etc., published in Taiwan);

C The large set of reports from the first series of excavations at the royal cemetery area at Xibeigang (Liang Siyong et al., *Houjiazhuang Yindai mudi*, 1962- etc., published in Taiwan);

D Postwar reports in mainland monographs and journals;

E A number of specialized studies of Anyang animal remains and offerings.[30]

Anyang animal and human skeletal remains have been found mainly in three kinds of circumstances, which form the framework for my review. They reflect not only the precise remains of hunting, but they do constitute recoverable traces of the prey's destiny within the Shang context. They are:

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[28] It is not yet possible to associate specific archaeological remains with subdivisions of the late Shang, constructing a picture of changes in animal use or relating material remains more closely with the changes in the institution of the royal hunt seen in the oracle inscriptions. We must accept the more general dates and further confirmation of the trends I seek to identify will depend on the refinement of various tools in response to a reoriented research agenda.

[29] On the special difficulties facing Shih Chang-ju as the editor of these reports, see Li Ji, *Anyang*, 149–51.

[30] These include: Pierre Teilhard de Chardin and C.C. Young's "On the mammalian remains from...Anyang," *Paleontologia Sinica*, Ser. C, Vol. XII, 1 (Nanking: The Geological Survey of China, 1936), an influential paper which will be critiqued further on; Yang Zhongjian, "Anyang Yinxu niujiaoling zhi faxian ji qi yiyi," *Zhongguo kaogu xuebao* 3 (1948): 261–65; Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," *Zhongguo kaogu xuebao* 4 (1949), 145–53); Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," *Guoli Taiwan daxue Wenshizhe xuebao* 5 (1953): 1–14, a seminal, if only all-too-brief article; Li Ji, "Hunting records, faunistic remains and decorative patterns from the archaelogical site of Anyang;" Hayashi Minao, "Anyô Inkyo honyû dôbutsu gun," *Kôkotsugaku* 6 (1958): 16–55; Wang Yuxin and Yang Baocheng, "Yinxu xiangkeng he 'Yin ren fu xiang' de zai tantao," in Hu Houxuan et al., *Jiagu tanshi lu* (Peking: Sanlian, 1982); and, on birds, Hou Lianhai, "Ji Anyang Yin xu zaoqi de niaolei," *Kaogu* 1989.10, 942–47. Also see Okamura Hideki, "Indai ni okeru shusan no henkaku," *Tôhô gappô* 27 (2000), 1–48; and "In-Shû jidai no dôbutsu kôgi," *Jimbun kagaku kenkyujô hôkoku* (Special Issue, 2001, 11–64); and below (2.2).

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> Storage or waste pits (in Chinese, "ash pits," or *huikeng* 灰坑, H number series): underground cellar-like structures associated with the remains of buildings and other architectural features (numbered in F series) at the late Shang center. These remains represent either refuse or waste; storage of grain or other foodstuff; or archives of oracle bones (2.2.1)
>
> Human burials (*mu* 墓, M number series): here, animals (and sometimes additional human beings) serve as additional grave offerings, alongside objects such as ceramics, weapons or bronzes (2.2.2)
>
> "Sacrificial pits" (*jisikeng* 祭祀坑, also numbered in the M series): in these Shang people made ritualized disposals of goods, animals (or people), as sacrifice; thus they are neither graves, nor ash pits for storage or waste (but the functions may overlap, such as when humans are themselves buried as offerings in "sacrificial pits;" see below; 2.2.3)

Several general terms deployed here deserve more explanation:

* "Storage" pits and waste ("ash") pits. These have sometimes been re-assigned as "sacrificial pits" (e.g. MA, MB, MC and MD, in the area C building foundations; see below, 2.2.3), either because the remains were clearly articulated, or because the pits also contained burned bone, which depending on the circumstances may indicate sacrifice, rather than waste, or storage).[31]
* "Burials," or "graves" are forms of disposals of deceased members of society who have met with death from disease, old age, war, or other calamities. Burials in the Shang context also often may include additional sacrificial offerings, including animals (almost exclusively a small range of domesticated animals), human beings, and material goods.
* "Sacrifice": the intentional disposal of animals, people or goods which are renounced and removed from immediate human use, either by being killed and wilfully disposed of, or simply by being renounced in some other way (as with burial offerings).[32] Thus the sacrifices in "sacrificial pits" (2.2.3) differ from the waste disposal of ash pits (2.2.1) in that the items found in them and the use value of those things have been intentionally and wilfully "given up," rather than being discarded because their immediate use value already ended (when they are consumed, broken, etc.; such features and structures may also, of course, be pregnant with meanings). The sacrificed items (animals, material goods, human enemies, or low-status people) are possessions which are intentionally and ritually

[31] When rammed-earth pits are found to be holding "archives" of oracle bones (such as at Huayuanzhuang [see Anyang work team, "1991 nian Huayuanzhuang dongdi, nandi fajue jianbao," *Kaogu* 1993.6, 488–99]), they should not be called "waste pits." In Chinese both are *huikeng*. Shih Chang-ju said features that were "clearly" "burials" should be assigned "M" (burial) serial numbers, not "H" for ash pits (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang* [Nankang: Academia Sinica, 1980], 364).

[32] For a penetrating review of the concept of sacrifice as the giving up or renouncing of living things, and for a Wittgensteinian view of a "family" of sacrificial phenomena, see Valerio Valeri's seminal essay, "Wild victims: Hunting as sacrifice and sacrifice as hunting in Huaulu," in *Fragments from Forests and Libraries: A Collection of Essays by Valerio Valeri* (Durham: Carolina Academic Press, 2001), 249–88.

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renounced by the living. Put otherwise, the renouncing, killing or outright murder of these sacrificial items (at times archaeologically visible in cutting wounds imprinted in skeletal remains, otherwise inferred from the circumstances) are the ways in which the living discontinue their possession of these living beings and material goods. The act of symbolic removal from present and future human use and ostensibly from society itself clearly takes place in, and derives its meanings (as communicative status display, and so on) from *within* the social context, which in the Shang case is obviously hierarchical, and dynamic.

* This relates to the issue of how to define "sacrificial pits" (2.2.3) and differentiate them from low-status burials (2.2.2). The "sacrificial" pits were called "small graves" in many pre-war reports. Later, they were redefined as sacrificial pits (believed to hold sacrificed "slaves"[33]), but they are nevertheless still numbered in the "M" (*mu* 墓) series for human graves, in archaeological reports. Low-status burials generally lack traces of mutilation in the main occupants, and the presence of limited numbers of intentional grave goods or offerings accompanying the buried person, who can then be assumed to have died naturally, buried in an "everyday" mortuary context. Human remains which show mutilation, and/or lack grave goods, are readily defined as "sacrificial pit" offerings. Non-mutilated, *intact* humans also are made to follow the deceased higher-status person in their death, i.e. as offerings, in *all* types of tombs (including in lower- and medium-status Shang tombs). Thus, human bodies with no trace of mutilation, and who have even been given some grave goods of their own, may still also qualify as sacrifice (in the sense given above, i.e. a removal from use by the living in the manner of, say, dogs or horses, equally intact, who are made to die in order to follow the dead as *posthumously* useful *sacrificial* offerings). Such graves, when there is a spatial or other association with a regular burial, could either be called sacrificial burials—as they sometimes are in Western scholarly writings—or labelled "sacrificial pits" (*jisikeng*). (Note that there are also a number of instances of individuals who appear to have been subjected to various forms corporeal punishment, reflected in oracle bone graphs. We may regard these as the remains of Shang subjects, who suffered punishment on account of crime, etc. and not as sacrificial offerings[34]).

The implications of these distinctions, and of the treatment of humans as animals, will be discussed further in the conclusions. The nature and quality of the information we have on these remains depends to a high degree on the circumstances of the archaeological research, and the presentation will therefore necessarily also trace parts of the course of their discovery.

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[33] Yang Baocheng, "Yin xu fajue chengguo yu zhanwang," 40–41. The choice of label was informed by Chinese Marxist theory, associating the Shang monarchy with slavery, abuse of human life, and (surprise!) waste. Yang Xizhang and Yang Baocheng, "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," *Kaogu* 1977.1, 13–19; 33–36. The plates illustrating this report includes a photo of a mass meeting of soldiers, farmers and workers assembled to denounce the aristocratic rule of the Shang dynasty class society and the associated practice of sacrifice of oppressed slaves, as interpreted by the Chinese Marxist archaeologists. Today this is of great historical interest, and helps us understand how contemporary socio-political concern have colored the research on sacrifice. They note the animal remains in passing (p.16), but only say that they are sacrificial in nature and no different from the offering of slaves in human sacrifice (!).

[34] For examples indicating leg amputations, noted in a number of skeletons, see Liu Yiman, "Kaoguxue yu jiaguwen yanjiu," 2–3.

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2.2.1 Remains found in storage or waste pits ("ash pits")

All but three of the 15 pre-war pioneer seasons were spent at Xiaotun Locus North, the center of the "Yin ruins," and up to 90% of pre-war excavated animal remains came from ash pits there,[35] and are continuously found there. Initially, excavators dug long trenches forming a large network and further expanded when specific features such as an ash pit was encountered.[36] The early trenches yielded hundreds of inscribed and uninscribed oracle bones,[37] pottery, etc., for which location, depth and soil color were recorded. Although animal skeletal remains were recorded to some extent in later seasons, during the earliest three seasons they apparently were not always recorded ("...there were very many more large animal bones, not included here, but stored at Anyang..."[38]). As the excavations expanded, large excavation pits were opened[39] and it was realized that what had at first been thought to represent hardened flood sediment deposits was a large complex of rammed-earth building foundations, some constructed within vast building "beds," some built directly on the ground, and some with foundation stones that probably supported wooden pillars. It became apparent that the technique of pounding layers of clay-rich soil into a hard surface had also been used in many storage and burial pits, which became easier to recognize. Starting with the fourth season, tracing these structures became an important goal, and as one result of this, records were further improved.

The building foundations at Xiaotun Locus North, over fifty in all, form the most important part of the Shang center apart from the royal tombs. The buildings formed three groups, A, B and C,[40] described in the first report volume.[41] One interpretation has been that the A group represented royal living quarters; B temples, and/or palaces; and C perhaps sacrificial altars; also, on the basis of the associated distribution of metallurgical remains, it has been suggested that area A structures had been built first, then B, and C last.[42] This is not entirely convincing: Such a view

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35 Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 1953, 3 ff. Seasons 10–12 in 1934–35 were conducted at the royal cemetery area at Xibeigang.

36 Reminiscent of the methods of General Pitt-Rivers, and Mortimer Wheeler's box-grid method. See Dong Zuobin, "Zhonghua minguo 17 nian 10 yue shijue Anyang Xiaotun baogao shu," in *Anyang fajue baogao* 1, ed. Li Ji (Peiping: Academia Sinica, 1929), map 3; Li Ji, "Xiaotun dimian xia de qingxing fenxi chubu," in *Anyang fajue baogao* 1, 37–48, map 4, 5.

37 These were discovered in undisturbed caches, as isolated fragments, or in deposits disturbed either by recent looters or by post-depositional digging (farmers constructing wells, etc.).

38 Cited from Dong's note in his summary table for the first season: Dong Zuobin, "Zhonghua minguo 17 nian 10 yue shijue Anyang Xiaotun baogao shu," 35.

39 Most descriptions and plans in the later reports are offered in terms of these 10x10m pits. For example, burial pit M331 is in the SE part of C314 (located in area C, excavation pit 314).

40 A had 15 separate units of building foundations, B twenty-one, and C seventeen. Having already used Latin letters to designate the initial, large arbitrary excavation units at Xiaotun, the archaeologists here used the Chinese labels *jia*, *yi*, and *bing*. Li Ji (*Anyang*, 151 ff.) thus renders these as "alfa," "beta" and "gamma," but Chang (*Shang Civilization*, 92 ff.) calls them Northern, Middle and Southern Groups, although in Shih Chang-ju's reports, these terms had been used in English for three subdivisions of burials associated with the important structure B7 (*Yinqi yicun* 7) (cf. *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang*, 1970, 1972, 1973). The "group" refers to the structures, but "Northern etc. [section]" refers to associated burials.

41 Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: yi bian. Jianzhu yicun* (Nankang, Taiwan: Academia Sinica, 1959); see too Li Ji, *Anyang*, 49–73, 95–104; K.C. Chang, *Shang Civilization*, 73 ff., Virginia C. Kane, "A re-examination of An-yang archaeology," *Ars Orientalis* 10 (1975), 93–110. The burials were described in more detail in later volumes of Shih's reports (see 2.2.2).

42 K.C. Chang, *Shang Civilization*, 92, quoting Shih 1959, 327–28, tables 129–130.

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of "practical" rise and "sacrificial" decline may be prejudiced by the Classical texts inspired by the Zhou enemy, which would predict "religious" decadence and decline going before the fall of the Shang dynasty to righteous Zhou attackers.[43] The three distinct palatial building groups have since come to be seen as an integrated whole, where each have been constructed over considerable time.[44] When viewed from the outside, such as from the north side of the river Huan, the site and the palace buildings must have appeared commanding and imposing. Although the surrounding landscape today is dominated by flat farmlands, any visitor will notice that these buildings were located in a strategic position in a corner bend of the river. West and south of the architectural remains, a moat has been found, indicating a defense perimeter inside the river bend that creates an enclosure of the center on all four sides.[45] This probably reflected what has been called the "squareness of the Shang cosmos,"[46] an emerging penchant for cardinal directions, including in alignments and arrangements of human burials, and other aspects of increasing regularization (on which more below).

In the earliest reports, details on animal remains in the central Xiaotun Locus North area are included only occasionally, as "deer antler," "horse hoof" (sic), etc.;[47] in the case of clearly defined features, the records are somewhat better: "Round pit at second northern extension of horizontal trench 13C [...] large potsherds, animal bone, shell, deer teeth, a very large number of bovine horns; also some bone plates put in layers, bone projectile points, and fragmented jades..." Illustrations show the more prominent caches of deer antler, uninscribed bovine scapulae, and turtle plastrons.[48] In some pits with uninscribed oracle bones, fragmented human bone was also found.[49] Many more skeletal parts from wild and domestic animals continued to be found in the undefined trenches, and in ash pits: tiger and leopard, "rat type" bones, and so on, including cattle and buffalo (in great contrast to the specially built

[43] In determining both the relative and the absolute date of these structures, the archaeologists relied heavily on the understanding of the periodization of oracle bones discovered during the excavations, i.e. the 5-period periodization set down by Dong Zuobin. Oracle bone evidence has later been found to indicate that the date of the C foundations could be earlier, corresponding to or even predating the reign of king Wu Ding (Xiao Na, "Anyang Xiaotun Nandi faxian de Duizu buci, jianlun Duizu buci de shidai wenti," *Kaogu* 1976.4, 234–41; Institute of Archaeology, *Xiaotun nandi jiagu* (Shanghai: Zhonghua, 1980–1983), 17; also, Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," *Kaogu* 1988.10, 930, 932; etc.

[44] Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," 930.

[45] Personal observations from a visit in September 1993. The drawing of the Shang center in Paul Wheatley's *The Pivot of the Four Quarters* (Chicago: Aldine, 1971), 44–45, seems to portray a lake rather than the Huan river and also doesn't include the rest of the defense perimeter, might be replaced by new illustrations based on new knowledge of the site and its environs. See Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," 932; Tang Jigen, "Zhong Shang wenhua yanjiu," etc.; Anyang work team,"Huanbei Shangcheng de kaogu xin faxian."

[46] Keightley, *The Ancestral Landscape*, p. 81; see too Wheatley, *The Pivot of the Four Quarters*.

[47] Actually the horse probably never occurred in any ash pits. See Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 6–7.

[48] Li Ji, ed., *Anyang fajue baogao* (1929), 236; fig. 4–6.

[49] Li Ji, ed., *Anyang fajue baogao* (1929), fig. 7.—Li wrote that this showed some human bone was "not treated respectfully" in the Shang dynasty, but in itself this did was not substantial evidence for human sacrifice, as suggested by Guo Moruo (cf. Li Ji, *Anyang fajue baogao*, 1929, 239). Here, the function of such pits either for waste deposition, storage, or some other purpose is often left unexplained. This was before the later discoveries of sacrificial burials of large numbers of decapitated humans or domestic animals used in offerings, described below [2.2.3]).

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"sacrificial pits," where, apparently, all bovines without exception were domestic cattle, not buffalo).[50] One trench expansion yielded the remarkable, much-debated find, the inscribed skulls of three large mammals. One has been identified as a wild bovine,[51] two were from deer.[52] Yet another storage pit discovered in 1931 contained a scapula and several vertebrae of whale, along with one elephant mandible,[53] of great interest, but poorly recorded.[54] This exemplifies the incomplete nature of the published record for the ash pits. Shih Chang-ju noted more examples with large amounts of animal bones (H30, etc.), without further details.[55] Other Xiaotun pits contained pottery, bronze weapons, or other artifacts; many others contained only uniform greenish soil (perhaps subterranean granaries).[56]

In the post-war period, several more important excavations have been conducted in the area. More architectural remains have been found (see 2.2.3, below), but nothing that compares in scale to the building clusters at Xiaotun Locus North or to the royal tombs. Other important discoveries include bronze production areas and burials associated with the building foundations.[57] Shang period bone work-

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50 Shih, "Henan Anyang... dongwu guhai," 5, 9 (for example, "in the pit HIII"). It is not clear who made the identifications.

51 Dong Zuobin, "Huo bai 'lin' jie," in *Anyang fajue baogao*, ed. Li Ji, Vol. 2 (Peiping: Academia Sinica, 1929b), 326; cf. Li Ji, *Anyang fajue baogao*, 1929, map 5; only the location, no other context information is provided. The identity of this animal has been much debated, mainly because of the mention of an animal in the inscription. The skull was from a buffalo. Still, some have argued the name of the animal mentioned in its inscription was a rhinoceros (cf. species identification, 2.3.2).

52 They are all held in the Museum of the Institute of History and Philology, Academia Sinica, Taipei. The inscriptions are not oracle divinations, but "record inscriptions." See Dong Zuobin, "Huo bai 'lin' jie," and inscriptions in *Jiabian* 3939–3941. The bovine skull (*Jiabian* 3939) is *Heji* 37398, Period V (on citations of inscriptions, see 3.1). Other similar but less well provenienced finds of inscribed bones from hunted animals have been made, but they never seem to have been used for divination. Keightley, *Sources of Shang History*, 8 n. 22 refers to the tiger bone in White, *Bone culture of Ancient China*, (28, 96–97, pl. 15); inscribed with the record of the capture of a large tiger. See too Hsü Chin-hsiung, *Oracle Bones from the White and Other Collections* (Toronto: Royal Ontario Museum, 1979). Four other large inscribed scapulae believed to have come from Xiaotun (published in in 1914 in *Jinghua* (*Yinxu shuqi jinghua*), well before the excavations started, were first thought to be from elephants, but they were later also shown to be bovine bones (Dong Zuobin, "Da jianjiagu juefei xianggu zhi zheng," *Zhongguo wenzi* 3 (1961); from what species is unknown). Another inscribed scapula is, however, likely to be from an elephant; it records a hunt (*tian*) but no names of captured animal (= *Heji* 13758, I; see Jin Xiangheng, "Jiaguwen zhong de yi pian xiang jianjiagu keci," *Dalu zazhi* 69.4 (1984), 1–4.

53 Ash pit no. E10. See Li Ji, *Anyang*, 68–71, map p. 71. No detailed record is available. Whale bones were later also found in royal tombs (see below, 2.2.2.3).

54 For this, and another similar pit (E16), Li Ji (*Anyang*, 1977) only referred to the chronological tables published by Shih Chang-ju in 1952. But the record there for this particular season only summarily mentions E16 (not E10); for E16, Shih (p. 12) mentions a whale scapula and tiger bone along with an inscribed deer skull, and 781 inscribed oracle bones. The bronzes and pottery have suggested a date for E16 of Yinxu Period 1 or 2 (Peng Yushang, "'Bin zu buci de shidai fenxi," in *Xu Zhongshu xiansheng jiushi shouchen jinian wenji* (Chengdu: Bashu shushe, 1990), 102, quoting Li Ji, "Ji Xiaotun chutu zhi tongqi," *Zhongguo kaogu xuebao* 1948.3; and Zou Heng, "Shilun Yinxu wenhua fenqi," *Beijing daxue renwen xuebao* 1964.5, 60–61, table 4. For a recent summary, see Ch'en Fang-mei, "Some thoughts on the dating of Late Shang bronze weaponry."

55 Shih Chang-ju, "Xiaotun de shizi jiao yu shizi mu," in *Qingzhu Li Ji xiansheng 70 sui lunwenji*, Vol. II (Taipei: Qinghua xuebao, 1967), 585–625, conceded that he is "no zoologist" and identifications may not be entirely reliable. (One questionmark remains regarding his note that species such as elephant and whale were only found in burials at Xibeigang (Shih, "Henan Anyang... dongwu guhai," 5). The early record clearly indicates such remains also came out of pits at Xiaotun, as mentioned above.

56 Guo Baojun, "B-qu fajue ji zhi yi," in Li Ji, ed. *Anyang fajue baogao* (Peiping: Academia Sinica, 1933), quoted by K.C. Chang, *Shang Civilization*, 98.

57 At Miaopu Beidi, south of Xiaotun (Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," 931, Institute of Archaeology, *Yinxu fajue baogao 1958–1961* (Peking: Wenwu, 1987), 79–89.

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shops have been found, yielding large amounts of unfinished and worked bone as well as tool-making tools;[58] the raw bone material was mainly from cattle and pigs, sometimes also horses, sheep, dogs, and deer antlers and bone.[59] One separate pit excavated in 1987 contained a cache of interesting bird bones (see below: 2.3.2, Species identification). Postwar discoveries of ash pits also include the 120 pits found during the 1973 excavations at Xiaotun Locus South. Many contained stored oracle bones, published first and separately; others were refuse pits with discarded tools and animal remains such as deer antlers and other unspecified refuse,[60] which apparently has yet to be identified, quantified, and analyzed.

The animal remains recorded from pre-war excavations of ash pits originally were to be published by Liang Siyong, who recognized their high importance. Due to the war, his tragic illness, and his premature death, they have not been published.[61] Re-analysis of original notes, along with new research on remains that have been retained for future study, might include attention to both the temporal and spatial distribution of different species within the sites, the distribution of specific animal parts—such as, answering the question of precisely where the tiger skulls were found (reportedly more than twenty tiger skulls, along with some limb bones!)[62]—as well as the study of cutmarks of refuse (to attempt to understand butchery patterns and comparing them with oracle-bone inscriptions regarding sacrifices, etc.).[63] A renewed research program taking these issues into account could help us arrive

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[58] South of the village of Dasikong, north of Beixinzhuang village, and in other localities (see Institute of Archaeology, *Yinxu fajue baogao 1958–1961*, 79–89).

[59] Institute of Archaeology, *Yinxu fajue baogao 1958–1961*, 88; also Institute of Archaeology, *Yinxu de faxian he yanjiu*, 94, 95.—The reports rarely offer detailed information on the raw material used in such bone workshops, and few studies attempt to relate the bone working industry to the faunal remains and to animal use in a wider sense, but see W.C. White, *Bone Culture of Ancient China* (Toronto: University of Toronto Press, 1947); also Wang Ying, *Rank and Gender in Bone Art at the Late Shang Center at Anyang* (University of Pittsburgh, 2000, which I have not seen). As for Shang sites outside Anyang, An Jinhuai briefly discussed the raw material in the "palace area" bone workshops of the pre-Anyang Shang city at Zhengzhou, in "The Shang city at Cheng-chou [Zhengzhou] and related problems," in K.C. Chang, ed. *Studies of Shang Archaeology* (New Haven: Yale University Press, 1986), 15–48, citing his report in *Wenwu* 1983.4, 1–14, which identifies cattle, pig, deer and human bones as used there. Zhengzhou bone workshop materials are also mentioned in a preliminary study of the ca. 100 human skulls found at Zhengzhou, believed to be "drinking vessels" manufactured and discarded in Shang times (Hao Benxing, "Shilun Zhengzhou chutu Shang dai rentou gu yinqi," in Henan sheng wenwu yanjiusuo, ed. *Henan Shangcheng kaogu xin faxian yu yanjiu 1985–1992* (Zhengzhou: Zhongzhou guji, 1993).

[60] Anyang work team, "1973 nian Xiaotun nandi fajue baogao 1973," *Kaoguxue jikan* 1995.9, 52 ff. (see p. 59 ff. for the brief mention of deer horn in H25; unspecified "animal bones" along with scattered human bones and other discarded items in H50). There were also pits regarded as sacrificial pits, with humans and horses, and also human burials (see below).

[61] Many of the records forming the original data for Liang's intended volumes are probably still available for re-examination. Shih Chang-ju, who participated in several of these excavations, suggested in a conversation in Taipei on June 15, 2002 that while much of the remains may have been lost, the records are probably still extant. In his important 1953 article, Shih had already mentioned that animal bone finds originally were recorded with context. He also said that all animal bones examined by Yang Zhongjian et al. ("Anyang Yinxu zhi furu dongwu qun buyi," 1949) were recorded with both the location coordinates and stratigraphic position (*cengwei*) (Shih, "Henan Anyang... dongwu guhai," 4). This doesn't includes those examined by Teilhard and Young as reported in their article, "On the mammalian remains from... Anyang," For more on the methodological problems involved, see section 2.3.1.

[62] Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," 146.

[63] The study of butchery marks on skeletal remains has only recently been initiated in Chinese archaeology as part of a more sophisticated approach to the study of animal use.

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at a more sophisticated and comprehensive understanding of patterns of animal use both inside and outside of burial contexts, and how they evolved. On the further implications of the available data, see the conclusions (Part 5).

2.2.2 Offerings found in human burials

Intentional offerings in human graves of animals, together with humans offered in ways similar to animals, constitute another important class of data. Such remains are a form of sacrifice, found in a large number of Shang human burials. Because burials persist as clearly defined structures and often contain artifacts deemed more valuable than animal bones, they have historically merited more description. As a consequence the quality of the data is higher.[64] The late Shang burials[65] can be divided into three relatively distinct types:

Low-status human burials (2.2.2.1)
Middle-status human burials (2.2.2.2)
High-status human burials, or royal tombs (2.2.2.3)

All three types are found in spatially distinct planned cemeteries (rows or clusters of graves). The first two are found both north and south of the Huan river; the third category (royal tombs) is found almost exclusively in the Xibeigang 西北崗 area located across the river to the north (the tomb of Queen Fu Hao 婦好, an exception, is located near Xiaotun village just southwest of the main architectural remains, see 2.2.2.3).

2.2.2.1 Low-status burials

More than five thousand Shang-period lower-status burials have been identified in and near the late Shang center at Anyang.

Despite some internal variation, all share a relatively simple basic structure: a simple rectangular grave cut, just about large enough for burying one or several human bodies; only rarely are there traces of any wooden coffin; grave goods are present but they are relatively modest (ceramics, and various kinds of tools). As might be expected, there are only very few additional offerings of animal, or

[64] It is worth stressing that many issues remain in the exploration of social patterning in the mortuary program, which is only outlined here. On mortuary site analysis, esp. the distribution of grave goods, see the classic papers by C. Peebles et al., "Some archaeological correlates of ranked societies," *American Antiquity* 42.3 (1977), 421–48; and J.A. Brown, "The search for rank in prehistoric burials" in R. Chapman et al., *Archaeology of Death* (Cambridge: Cambridge University press, 1981), 25–37; also, B. Bartel, "A historical review of ethnological and archaeological analyses of mortuary practice," *Journal of Anthropological Archaeology* 1 (1982), 32–58; etc.

[65] As mentioned, dates given in Chinese archaeological reports for burials and sacrificial pits are often limited to placing them in the Shang dynasty. This is based on Shang style grave goods such as bronzes, and other artifacts (not oracle bones, which are only rarely found in burials or in sacrificial pits). C-14 dating has only been attempted for a limited number of the remains. In cases where there are few grave goods or none at all, as in many of the commoner's graves or in the sacrificial pits containing nothing but skeletal remains of animals or decapitated humans, etc., the spatial and stratigraphic context still implies an association with the royal tombs or with Xiaotun architectural remains.

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humans. Occasional single dog offerings are the most common, sometimes using several dogs, typically buried directly under the body of the grave occupant in what is called a "waist pit" (*yaokeng* 腰坑).[66] Only in rare cases are additional humans used. These are then buried with the main grave occupant, as offerings directly comparable to the use of dogs.[67]

Many low-status burials are "suburban," located closer to low-status living quarters nearby (imperfectly known), just outside of the palace area, to the west, south and northeast. A number of low-status human burials have been found and excavated in the Xibeigang royal cemetery area, both before and after the war.[68] Low-status graves are identified by the completeness of the skeletons, the layout, and the modest grave goods (i.e., the features which create the main contrast with the "sacrificial pits"). Sometimes information is provided on any additional animal or other remains included as offerings.[69] Because these burials are associated with the Xibeigang royal cemetery area and are interspersed among the "sacrificial pits" found there,[70] they will instead be reviewed in section 2.2.2.3.

In the Xiaotun palace area itself, lower-status burials are not common (which probably underlines the high-status character of this center within the center). Examples include a few single human burials with standard "waist pit" dog offerings.[71]

Nearby, to the west and south of Xiaomintun village, extensive excavations of a large cemetery dominated by small low-status burials were carried out in 1969–1977. A report summarized 939 burials. There were only a few medium-status burials, and only 18 had additional humans as offerings. Most were simple low-status or commoner's burials.[72] There were few animal offerings, but one-third

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[66] This feature of the Shang mortuary program apparently became increasingly popular in Middle Shang times (Tang Jigen, "Zhong Shang wenhua yanjiu," 397).

[67] For tabulations of Shang dog offerings as well as offerings of horses, cattle, sheep and pigs, see Okamura Hideki, "In-Shû jidai no dôbutsu kôgi" (also includes similar offerings from Neolithic through Zhou times).—Humans are not included in these tabulae as a major category of offerings. As mentioned, our identification of "human offering" is mainly based on varying degrees of pre-burial mutilation (the extreme example being the beheaded humans of the Xibeigang royal tombs), or a perceived "supplementary" relation to the main occupant who is invariably placed centrally and in an extended, supine position. When, in the Anyang context, such "supplementary" skeletons are mutilated in addition to having been placed in an inferior position, they are interpreted as remains of slaves or other inferiors that have been reduced to offerings, and they are believed to correspond to the offerings seen in medium-sized and royal tombs where they occur in much larger numbers (see below, 2.2.2.4; compare also Table 1, p. 168–69). (The latter "supplementary" type, non-mutilated, might include forerunners of the practice of burying wives with husbands seen in later Chinese mortuary practice. The data on gender, alas, do not permit the pursuit of this line of inquiry).

[68] Kao Ch'ü-hsün, "The royal cemetery of the Yin dynasty at Anyang," *Kaogu renlei xuekan* 1959.3, 1–9; K.C. Chang, *Shang Civilization*, 119–124; Yang Xizhang and Yang Baocheng, "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," *Kaogu* 1977.1, 13–19.

[69] Cf. esp. Yang Xizhang and Yang Baocheng's brief overview ("Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng); also Okamura Hideki, "In-Shû jidai no dôbutsu kôgi."

[70] Kao Ch'ü-hsün, "The royal cemetery," appropriately discuss them along with the "sacrificial pits" there.

[71] M31, described by Shih Chang-ju (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang*, 1970, 369–72) on the "northern section" (of the Xiaotun area associated with building structure B7); M326 and M329, described by Shih (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu*), 1980, 258–71 (on burials outside the building foundations of the C area).

[72] Anyang work team, "1969–1977 nian Yinxu xiqu muzang fajue baogao," *Kaogu xuebao* 1979.1, maps on p. 28–36. Most burials in this cemetery were at a depth of about 1–1,5 m, not sealed by any cultural layers, but they included Shang pottery. As with many post-war reports, there are no stratigraphic section plans and only limited written explanation of the stratigraphy.

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included dog offerings, most often a single dog, but sometimes two or more. The dogs were placed either in a "waist pit," in the grave fill, or both.[73] The orientation of the dogs differed if there was more than one—giving an impression of an intention to obtain added posthumous "protection" from an increased number. Interestingly, many dogs had a bronze bell at the neck, not reported from any dog offering even in royal tombs. Perhaps these were hunting dogs, or guard dogs. Occasionally, sets of animal remains had been added: the formal combination of bovine/sheep/pig limb bones also seen in association with funerary vessels in some royal tombs (see below). One such grave contained three separate dog skeletons and burial pottery vessels associated with a sheep leg.[74] This type of offering mainly occurred in addition to dog offerings, but occasionally also without the presence of dogs (as in M1024, where one articulated bovine limb was found in association with a single offering of a human being). Other than complete dog skeletons, there were occasional additional animal offerings in seven graves: heads or incomplete skeletons of dogs, sheep, pigs or bovines; limb bones of bovines, pigs, sheep, or chicken; and occasionally turtle or fish remains.[75]

The pattern or program evident in these data is valid for most low-status Shang burials. What is especially notable already, is that no wild animals at all, apart from occasional turtle or fish remains, are apparently included amongst the offerings included in these burials. This intriguing and highly significant pattern will be seen to repeat itself throughout most of the visible expressions of Shang mortuary programs.

2.2.2.2 Medium-status burials

These are believed to have been constructed for Shang aristocrats, courtiers or officials, the "managers" of the Shang state with relatively high status, in contrast to the rank-and-file Shang people seen in the low-status burials. They are much less common and are found either separately or in small groups (cemeteries), including in locations near the central palace remains. They are substantially larger than the low-status burials but generally lack the access ramps and the wealth of grave goods seen in the much larger high-status or royal tombs.

Middle-status burials typically also have dog offerings in waist pits and often additional dogs placed around the walls. There are also larger numbers of human offerings, suggesting whole groups of slaves or servants, in lieu of the singular or

[73] In 339 of the total of 939 burials, (Anyang work team "1969–1977 nian Yinxu xiqu muzang fajue baogao," 46–49). The total number of dog skeletons was 439 (according to John Olsen's personal observation in 1984, only one [sic] was collected and saved [J.W. Olsen,"Prehistoric dogs in mainland East Asia," in S.J. Olsen, ed., *Origins of the Domestic Dog* [Tucson: University of Arizona Press, 1985], 61]). In addition to these obviously low-status graves, there was one small group of four graves with single, southern-oriented access ramps [M 93; M698–701], and five horse-chariot pits (on these, see below). Compare also the dog burial in one of the six Shang lower-status tombs found in the Xiaotun Locus South excavations of 1973; it too, apparently, conforms to the general pattern (Tomb M4 at Xiaotun Locus South; cf. Anyang work team, "1973 nian Xiaotun nandi fajue baogao," 64).

[74] M692 (Anyang work team, "1969–1977 nian Yinxu xiqu muzang fajue baogao," 46, fig. 25).

[75] Anyang work team, "1969–1977 nian Yinxu xiqu muzang fajue baogao," 48–49. Turtles or fish were found in only two graves, M667 and M1006.

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several humans that occasionally "follow the dead" in lower-status graves. Medium-status tombs often share some further elaborations of features in the Shang mortuary program with the still-larger royal tombs (2.2.2.3): thus, there may be a step platform halfway down the grave pit (an *ercengtai* 二層台); centrally placed wooden coffins (i.e. traces thereof); and more elaborate sets and quality of material grave goods, as well as of animal and human offerings:

* Two medium-sized tombs were excavated in 1976 in the Xiaotun cemetery area located near the early high-status tomb of Queen Fu Hao, with whom they are believed to have been contemporaneous. The area is set apart from the main Xibeigang area of royal tombs. M17, with two apparently subadult humans used in addition to the main tomb occupant, also contained one articulated sheep leg; M18, with five such human sacrifices, again seemingly young or subadult males, and accompanied by weapons. There were two dog burials, one in a "waist pit," and one in the matrix of the north "second-level platform" on which one pig limb bone was placed. In the grave were also remains of an articulated bovine limb, and some important grave goods.[76]
* At Xiaotun itself burials in this category also include M232, an isolated burial located southwest of the main buildings.[77] Other than the main occupant, interred in a central coffin, it contained 8 humans. Three dogs were buried around the top of the grave itself;[78] another dog was placed in a waist pit.[79] All were buried heading north, just as the majority of the human offerings. In addition, what may have been chicken bones were noted in the upper part of the grave: this was either refuse, or perhaps a form of sealing sacrifice for the grave.[80]

At the "C" building complex at Xiaotun (southwest of B, the largest complex), four medium-sized tombs were found, along with four separate animal pits and four lower-status single human burials:[81]

* M362 was equipped with a second-level platform; 12 of its total of 13 human bodies were sacrificial burials, arranged on the platform around the four walls of the main burial chamber.[82] The grave had been robbed of most jade or metal objects, but still contained weapons, such as a bronze spearpoint, and fragments of inscribed bone and shell (otherwise very rare in mortuary contexts). In addition to the dog in the waist pit, there were two more dogs: one at the eastern wall, another in a separate pit on the southern second-level platform. On the

[76] Pottery, and bronze vessels. Anyang work team, "Anyang Xiaotun cunbei de liang zuo Yindai mu," *Kaogu xuebao* 1981.4, 493, 509.

[77] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san.* 1973; on B7 sacrificial pits, see below (2.2.3). M232 was in the southern section of the area associated with building structure B7.

[78] Four fragmented bovine horns or horn cores and a sheep skull found directly above the grave belonged to a different pit, H152 (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san.* 1973, 5,16).

[79] The excavators noted that some (?) of the four dogs had elongated skulls, some short skulls, and perhaps did not belong to the same subspecies (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san.* 1973, 21–22, pl. 2).

[80] Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 12.

[81] Here Shih Chang-ju saw an intentional design, a 4+4+4 pattern (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang*, 258).

[82] One was a displaced but still partly articulated human skeleton discovered in a vertical position—the excavators at first speculated that this might be the tomb's occupant himself [or, herself] but Shih Chang-ju concludes it was more probably that of an unlucky tomb robber!

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northern part of the platform, there was also a set of animal limb bones similar to that seen in both low-status and royal tombs:[83] These were mostly complete, articulated mammal limbs: one sheep (?) limb with the scapula still attached (the last phalanxes missing); one pig limb (?), scapula attached (identified by its last phalanxes); and one bovine (?) limb. These bones are not definitely identified, nor is the side determined, but this is one of the more complete examples of this set "pig-sheep-cattle" sacrifice of specific animal limbs, along with complete traces of a woven mat discerned beneath all three components.[84]

* M331, immediately east of M362, was slightly larger, but lacking a second-level platform. Apart from the main tomb occupant, there were five sacrificial human burials divided on the east and west sides; and only two dog burials: one in a waist pit, and southeast of it the traces of one more dog burial.[85] M331, having escaped plundering, was very rich in grave goods, including four sea shells, other shells, bronze vessels, musical implements and some inscribed oracle bones. Significantly, this tomb showed that most grave goods had been smashed before burial, and in the case of both white pottery and oracle bones, only fragments were used. The wealth of various ornaments along with the relative lack of weapons caused excavators to believe the tomb's occupant was female (perhaps buried near her husband, in M362). Whatever the case, there was no offering of animal limbs, and fewer dogs, which may have been more closely associated with men, as guardians and huntsmen.[86]
* M333, where the upper part of the tomb had been severely disturbed, revealed one dog in a waist pit beneath the center of the wooden tomb floor, and two more dogs immediately to the south of the central coffin, but above the floor. There were also two human offerings, one along each side of the coffin, which held but fragments of the occupant.[87]
* M388 was similar to the above, poorly preserved but with a similar array of grave goods (bronze vessels, jades), and two dog burials: one in a waist pit, and one, very fragmented, to the north of the coffin.
* At Xibeigang, near the eastern cluster of royal tombs, tomb M259 is interpreted as the tomb of a royal family member, and as a warrior, because of the weapons included. Not much larger than a low-status grave, it did have a "second-level" platform, and grave goods indicating higher status. It included six dogs, one just a skull discovered in the tomb fill; the rest as complete skeletons placed on the platform, facing different directions. Scattered animal bones were seen in the dis-

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[83] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang*, 17; plates 2, 3. See also the royal tombs M1002 and M1550 (2.2.2.3), and the conclusions (section 5).

[84] An additional animal bone ["D"] was not identified—judging from the appearance, a large mammal humerus. It is unclear if there was a single mat for all three, or separate mats. In any case, this was clearly an intentional offering. In the tomb fill, at the level of the dog burials on the platforms, another bovine horn was found, possibly intentionally placed there. Shih Chang-ju (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang*, 28) suggested a similarity to the four bovine horns and the fragmented sheep skull found in relation to M232, although these might have belonged to another feature, see above).

[85] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang*, plan, 53.

[86] Shih Chang-ju, op. cit., 160.

[87] Shih Chang-ju, op. cit., 174, plate 115.

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turbed soil of a small, unsuccessful looters' pit. These may have been parts of the animals buried in the grave, or perhaps deriving from the sacrificial "set" of limb bones mentioned above.[88]

* Yet another example in the Xibeigang area is the isolated "59/Wuguan/M1" tomb of a lower-level aristocrat, located about 100 m south of the WKGM tomb at Xibeigang and excavated in 1959. It was particularly rich in grave goods, and contained six human offerings (four represented only by skulls), and one dog.[89]
* Outside Xiaotun and Xibeigang, tomb M160 at Guojiazhuang village nearby may be the most important undisturbed burial discovered since Fu Hao's tomb. The grave goods here amounted to 349 objects (including 288 bronzes, as well as bone and one ivory objects). The offerings also included four humans and three dogs, plus limb bones and scapulae of bovines and sheep, and two horse offerings buried at a short distance from the tomb.[90]

2.2.2.3 High-status burials, or royal tombs

These are twelve (or thirteen[91]) substantially larger and richer tombs concentrated in two clusters in the Xibeigang area ("Northwestern heights") north of the Xiaotun palace area, on the other side of the river Huan—evoking the duality seen at Luxor, Egypt, with temples for the living mainly on the Eastern side and a sprawling necropolis on the Western side of the Nile.[92]

One large tomb with four access ramps and Shang-like mortuary ritual (including the use of 48 human offerings), has been found in Shandong, at considerable distance from Anyang,[93] but Xibeigang is the only place where a cluster of such tombs has been found—a further indication of Anyang's importance in its day.[94]

The tombs are divided into a western and an eastern cluster, separated by about

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88 Anyang work team, "Yinxu 259, 260 hao mu de fajue baogao," *Kaogu xuebao* 1987.1, 111.

89 Anyang work team, "1969–1977 nian Yinxu xiqu muzang fajue baogao;" "1958–1959 nian Yinxu fajue jianbao," *Kaogu* 1961.2, 63–76.

90 In 1989, two horse burials apparently related to the grave were found, only 30 m away. Anyang work team, "Anyang Guojiazhuang 160 hao mu," *Kaogu* 1991.5, 390–91, pl. 1; Liu Yiman, "Anyang Guojiazhuang 160 hao mu de faxian ji zhuyao shouhuo," *Kaogu* 1998.9, 64–74.

91 One was empty and unfinished, and is widely thought to have been intended for the last, deposed ruler, Di Xin (Zhòu).

92 Excavations began at Xibeigang under Liang Siyong during seasons 10–12 (1934–35). The reports were not published until 1962–1976 (listed under Liang; ed. Gao Quxun). See too Kao Ch'ü-hsün, "The royal cemetery"; Li Ji, *Anyang*, 74–94, K.C. Chang, *Shang Civilization*, 111–24; Bagley, "Shang archaeology," 184 ff.; On the dates of the tombs, also Ch'en Fang-mei, "Some thoughts on the dating of Late Shang bronze weaponry."

93 The Sufutun tomb in Shandong (Shandong sheng wenwu guanli chu, "Shandong Yidu Sufutun di yi hao nuli xunzangmu," *Wenwu* 1972.8, 17–30; Bagley, "Shang archaeology," 219–21.

94 Li Ji underlined the contribution of the work of the three seasons towards the understanding of the Shang dynasty in terms of the organization of labor (as inferred from the labor needs for the construction of the large royal tombs), human sacrifice (both its presence, which had previously been doubted, and its unexpectedly large and pervasive scale), the nature of the material burial offerings, and the high level of technology of stone carving (jades) and bronze-making. See Li Ji's preface to Liang Siyong's *HPKM 1001* [Taipei: Academia Sinica, 1962), also Li Ji, *Anyang*, 82,84. The reports (Liang Siyong, ed., 1962–1976) explain the excavation procedures, with particular attention to the sequence of pits dug before and after the construction of the main tombs (such as pre-tomb features cut by the tomb, and the sequence of later looter's pits), and to the recovered artifacts (especially those of jade, bronze etc.).

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100 m. They have long access ramps, leading down into a central burial chamber, and because of their dramatic shape, Chinese archaeologists have labelled them "inverted pyramids."

Apart from large quantities of grave goods (which often, however, have been looted), they also frequently have elaborate offerings of both animals and humans, both within the tombs' central chamber and arranged as offerings on the access ramps, and in the tomb fill, sometimes also placed in associated pits in the immediate vicinity (which then may be [mis-]identified as *separate* "sacrificial pits").

The royal tombs are oriented north-south, with the descending access ramps in most cases extending out from the center into all four cardinal directions, so that the tomb plan will appear as cross with a square center, always with longer north-south ramps (alternatively, the ramps exist only on the north and south sides). Some tombs (M1001, 1004, 1005, and 1550) are located very close to each other, so that ramps cut into the ramp of an earlier tomb,[95] providing one basis for relative dating.[96] The ramps lead down to a central pit with a center wooden burial chamber, which in turn has a central wooden coffin. There is a second-level platform (*ercengtai*).

Liang Siyong's original plan was that the animal remains from these royal tombs should form a special chapter in the final reports. Because of Liang's early illness and death, however, this part of the plan was never realized.[97] The following is a summary of available information on the offerings of animals and humans, and their context:

* Tomb 1001: More than 30 looter's pits, recent as well as ancient, had been dug into this tomb; 20 more much later burials cut into the upper fill of the tomb.[98] The wooden burial chamber even featured some impressions of carvings left by the wooden chamber walls;[99] plus nine human sacrificial burials beneath the wooden floor, each was accompanied by a dog.[100] Liang Siyong compared the placement of "guardians" with dogs under the floor of the large tomb to the "waist pit" dogs of low- and medium status graves. Here, too, the dogs appear to have been put into their graves before the accompanying humans, and they were located as if "guarding against attack from the underworld."[101] The positioning of the nine man-with-dog burials around the corners of the floor was clearly intentional, and can be interpreted as posthumous guardians with dogs—possi-

[95] See the plan in Liang Siyong, *HPKM 1001*, Part 2, p. 2.

[96] The issue of how to correlate the tombs with individual late Shang kings has, of course, been much debated, in the absence of oracle bones which were not buried with the kings (or queens). See K.C. Chang, *Shang Civilization*, 112 ff.; Yang Xizhang, "Anyang Yinxu Xibeigang da mu de fenqi ji qi youguan wenti," *Zhongyuan wenwu* 1981.3, 52; and Yang Xizhang et al., "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," 14, quoting Zou Heng, "Shilun Yinxu wenhua fenqi," *Beijing daxue renwen xuebao* 1964.4–5.

[97] Li Ji, *Anyang*, 123–25.

[98] The tomb itself cut into earlier, Neolithic (Longshan) pit. Liang Siyong, *HPKM 1001*, p. 3–4 (the later burials are illustrated with photos in Part 2). On M1001, also see Bagley, "Shang archaeology," 185–92.

[99] Impressions of wood-carvings included a large snake, and other monster-like beings. See Liang Siyong, *HPKM 1001*, p. 24 and pl. 13, 39, 61; etc.

[100] Liang Siyong, *HPKM 1001*, 28–30; Li Ji, *Anyang*, 91–92. No further information is provided on these remains, except their orientation and position. There is no estimate of the sex; the drawings and photos (Liang Siyong, ibid., 30, pl. 16–20) indicate that all the humans were adult.

[101] Liang Siyong, *HPKM 1001*, 31.

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bly hunting dogs. There were also supplementary burials around the walls inside the tomb, also interpreted as sacrificial offerings, but these do not contain dog skeletons and may have held other types of servants.[102] In addition, the access ramps yielded a total of 59 sacrificial human burials lacking their head, arranged in groups[103] and also a total of 73 separate skulls,[104] the highest numbers on the southern ramp. Both the headless bodies and the heads had been put down successively as the ramps were filled in with soil at the time of the construction of the tomb.

Among the animal figurines in jade found in the tomb were naturalistic renderings of tiger, buffalo, an owl-like bird, turtle, frog, fishes, and cicadas.[105]

There were also 31 more human burials immediately outside and to the east of the main pit, also interpreted as sacrificial offerings for the tomb's occupant. They contained 68 mostly complete human skeletons, buried in numbers varying from one to five. A few had accompanying set animal limb offerings reminiscent of the program seen in lower-status burials.[106] Seven of these 31 pits had no human remains, but horse offerings (either 2, 3, or 4 whole adult horses in each pit, or burial).

* Tomb 1002: Immediately southwest of M1001, had been disturbed even more thoroughly than M1001; impeding excavation and recording. At northern ramp entry point, there was a sacrificial offering of animal limbs similar to those already mentioned from lower-status tombs: three animal limb bones, possibly bovine, sheep, and pig, combined with three different pottery vessels.[107]
* Tomb 1003: another royal tomb heavily looted already in ancient times, held many different artifacts, but some of the records from the excavations were later lost. On the bottom of one of the early looter's pits extending into the western ramp, excavators found unidentified scattered animal limb bones, one animal scapula and other bones (suggesting the same set as that seen in M1001), plus some artifacts, including an ivory cup. At the southern ramp entry point, a large whale rib and a whale scapula were found (apparently in situ, at a distance of about 1.5 m from each other, and in immediate association with the remains of two chariot wheels). This second whale scapula—the other found previously in an ash pit—came from one and the same whale. The discovery in two different

[102] Some were heavily disturbed, but others yielded small weapons such as bronze dagger-axes that could have been intended as guardian's weapons. A few had small wooden coffins of their own, thus displaying some similarity to independent low-status burials outside Xibeigang.

[103] They included both adults or adolescents (24 of the 59 are listed as "under 15").

[104] Some skulls were accompanied by a few of the cervical vertebrae, and others had cuts in their mandible, indicating some variation in the beheading of these offerings (Liang Siyong, *HPKM 1001*, 47).

[105] Other artifacts included a wealth of bone implements (Liang Siyong, *HPKM 1001*, 205 ff.).

[106] These included bovine limb bones in M1510, and 2 dogs in 2016—which also contained a pile of ten projectile points in bronze and two small dagger-axes. Other burials lacking animal offerings had even more of these projectile points (as many as 50 in burial M2077) (Liang Siyong, *HPKM 1001*, 48–56). They may have been tomb guardians, or low-status people unrelated to the tomb.

[107] Liang Siyong, *HPKM 1002* (Taipei: Academia Sinica, 1965), 19 ff. Plate 15 shows the three limb bones together with the three vessels, neatly lined up in situ, but lists no information on the identity of the bones. Liang speculated that the limbs probably still had flesh on them when they where placed in the tomb, so originally there probably was no distance at all in between the three well-articulated animal limbs).

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places of associated whale remains was regarded one of the most exciting of all the early seasons. It clearly was an exotic item, which testifies to the ability of the Shang kings to attract and bring in objects from afar.[108]

* Tomb 1004: Heavily looted, and similar except in that it retained more burial goods overlooked by looters (a wealth of bronze spearpoints, dagger-axes, and spears, and also two now-famous large bronze vessels decorated with deer-head and a buffalo head, found at the point of entry into the burial chamber of the southern ramp).[109] A number of disturbed remains of human sacrifices included skulls arranged similar to those in M1001. One such sacrificial burial (M1311), in the eastern part of the tomb fill, had a dog buried above the human skeleton and one more dog at the feet, oriented westward; beneath this yet another dog in a small pit dug immediately under the skeleton oriented eastward just like the human victim. The tomb yielded 239 animal bones (largely unidentified, sadly enough), which included two more whale bones.[110]
* Tomb 1217: Unlike the royal tombs described above no large looter's pit was discerned, but most artifacts had still been looted. Trace remains of wooden structures were found in the access ramps, plus "some natural remains, such as animal bones, dog skulls, pig teeth, deer antlers, turtle shell, *magui* turtle 'plates'(?), and shell," not described further.[111]
* Tomb 1500: Also heavily disturbed—but looters had dug mainly "accurate" pits directly down into the burial chamber to steal the main offerings, and hardly disturbed the access ramps and the burial chamber corners. A total of 116 human sacrificial burials were discovered, 114 in the form of severed human heads, either portioned out in depth intervals as the tomb was filled in, strewn around the corners deep in the burial chamber, or placed around the northern access ramp's point of entry.[112] Animal remains consisted in "two animal teeth, one dog skull, two bovine horns, 15 bone fragments, and 39 pieces of turtle shell."[113] The bovine horns were identified as a new species of takin (an exotic goat-like animal).[114] One interesting additional offering, placed in the southern access ramp area, was the three pairs of small animal figurines (dragons, buffalos, and tigers) arranged in pairs in two rows, probably also a form of tomb guardians.[115]
* Tomb 1550: The state of preservation of this tomb was the worst among all the large tombs, but four sacrificial burials with more or less complete human skeletons were found, as well as 243 severed human skulls, again concentrated in the

[108] Liang Siyong, *HPKM 1003* (Taipei: Academia Sinica, 1967), 5; 35, pl. 14; conversation with Shih Chang-ju, Taipei, June 15, 2002.
[109] Liang Siyong, *HPKM 1004* (Taipei: Academia Sinica, 1970), 30.
[110] One vertebrae, and one unidentified bone. Liang Siyong, *HPKM 1004*, 28–29, pl. 19; for whale remains, pl. 31; compare M1003, M1550.
[111] Liang Siyong, *HPKM 1217* (Taipei: Academia Sinica, 1968), 28.
[112] Liang Siyong, *HPKM 1500* (Taipei: Academia Sinica, 1974), 31 ff., successive plans on 33–38.
[113] Liang Siyong, *HPKM 1500*, 49–50.
[114] Yang Zhongjian, "Anyang Yinxu niujiaoling zhi faxian ji qi yiyi" (1948); also see 2.3.2.
[115] Liang Siyong, *HPKM 1500*, 40, plan on p. 41, 42; pl. 14, etc.

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northern access ramp point of entry into the central burial chamber and arranged in a way similar to M1500.[116] At the same spot was another set of animal offerings (but no pottery vessels): One sheep forelimb, and one bovine, laid down on top of the sheep bones. The report also makes brief note of "12 deer antlers, one buffalo horn, one 'animal hoof', 727 shells, 2 *magui* turtles, 148 turtle plates, and 12 'large animal bones', i.e. whale vertebrae" all found within a looter's pit extending down into the central burial chamber.[117]

In the eastern part of the Xibeigang royal cemetery three more similarly shaped large tombs were excavated in 1935 in an area about 100 m east of the western cluster: M1400 (the largest of all tombs in the eastern part; the only one with four access ramps), M1443, and M1129 for which results have not been completely published.[118] In addition to this cluster of three, two more have later been excavated here: the WKGM1 tomb (or "Wuguan da mu" 武官大墓, a major discovery), a further 50 m. east, excavated in 1950 and 1976, and M260, excavated in 1984:[119]

* The WKGM1 tomb, may be regarded as a part of the Xibeigang royal cemetery even though it is slightly smaller than most of the royal tombs. The main chamber had been looted, but a total of 79 additional human bodies were discovered. There were both intact and mutilated victims, the latter including 34 severed skulls.[120] 17 males were found on the west side of the tomb, and 24 females on the east—a dichotomy not recorded from any other tomb.[121] Some of the intact individuals, possibly royal attendants with higher status, had their own coffin and were accompanied by their own human sacrifice, or by an animal.[122] Pit E9 (E = east side of the main chamber) had a dog companion, and E10 immediately to the east of the main chamber was accompanied by a monkey skeleton, and some separate dog pits. The intact humans as well as the mutilated victims were all interpreted as stratigraphically contemporaneous with the tomb (similar to those seen in other royal tombs), even though they were located at different depths. Presumably they too were constructed in intervals, as the tomb was being filled in and finished off as a completed burial for the main occupant.

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[116] 235 skulls. The remaining 8 were found on the southern ramp. The skulls were put down onto the access ramp successively, in ordered rows perpendicular to the direction of the access ramp itself. For plans indicating successive depth of rows of skulls in the ramp, see Liang Siyong, *HPKM 1550* (Taipei: Academia Sinica, 1976), 19–21; on the looting disturbance, 1–2.

[117] The additional identification of Liang Siyong's original "large animal bones" as whale vertebrae was supplied by the editor, Gao Quxun (Liang Siyong, *HPKM 1550*, 26) (whale bones were also found in M1004 and M1003).

[118] These eastern royal tombs are not described in Li Ji's *Anyang*, or in K.C. Chang, *Shang Civilization*. Hu Houxuan, one of the Anyang archaeologists who stayed on the mainland after the war, published a summary on the Yinxu excavations up to the early 1950s which provided some information on these three tombs (size measurements, artifacts, etc.) but no information on animal remains. He briefly mentioned a sacrificial pit with burials under the floor of M1443 (Hu Houxuan, *Yinxu fajue* [Shanghai: Shanghai xuexi shenghuo, 1955] 87–89, ff.).

[119] They are believed to date to Yinxu period 2 (see the discussion in Yang Xizhang et al., "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," 14). The discovery of many sacrificed humans initiated a longstanding debate on Shang human sacrifice.

[120] Guo Baojun, "1950 nian chun Yinxu fajue baogao," *Zhongguo kaogu xuebao* 1951.5: 1–62; pl. 1–45; 14.

[121] This kind of information is otherwise mostly lacking from reports. The description of skeletal remains in post-war mainland reports is often as weak as the reports on pre-war excavations, but in some cases sex and/or tentative age estimates are provided.

[122] Guo Baojun, "1950 nian chun Yinxu fajue baogao," 15 ff.

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Separate animal offerings in WKGM1 amounted to 52, apparently all complete, articulated skeletons. In the eastern part of the tomb were 4 dogs, 1 monkey, 1 deer[123] and 9 other unidentified animals; in the western part, 2 dogs, 2 monkeys, and 6 other unidentified animals.[124] In addition, a total of 16 horse skeletons were found distributed on three pits in the northern access ramp area, accompanied by further dog skeletons and by kneeling humans caretakers. In the southern access ramp were three more horse pits arranged in a formation, the one in the center slightly ahead of the others.[125] The tomb was surrounded by a number of smaller pits, possibly additional sacrifices made over time, in commemoration of the buried person. No animal remains were mentioned from these pits in 1950 (but some from 1976[126]).

* M260 was a large, rectangular-shaped tomb with a single access ramp, and a main burial pit slightly smaller in size than the other royal tombs. The famous Si Mu Wu *da ding* 司母戊大鼎 bronze vessel is thought to have been looted from this tomb in the 1940s.[127] Although looted, the tomb yielded the remains of a total of 38 human sacrificial victims, including 22 skulls found in the ramp fill. Headless skeletons, probably those of the people from which these skulls were severed, were buried in separate pits away from the tomb.[128] There was another separate sacrificial pit under the central part of the main tomb chamber, containing a flexed male human burial superimposed on a dog skeleton, and equipped with a jade dagger-axe—reminiscent of the dog guardians in M1001 and M1004. The flexed position differed from the extended "guardian" burials described from other royal tombs. While also smaller, the location under the floor of the main tomb was similar. The fill of the central tomb chamber and the access ramp of M260 is said to have contained bones from "horses, bovines, sheep, pigs, dogs and other animals," but no count was done, reportedly because of the bad state of preserva-

[123] Guo Baojun, op. cit., pl. 6.

[124] Guo Baojun, op. cit., 22; Hu Houxuan, *Yinxu fajue*, 130. Another report gives the number of animals found inside WKGM1 as 27 horses, 11 dogs, 3 monkeys, 1 deer, and 15 other animals, in all 59 individuals. Anyang excavation team, "Anyang Yinxu nuli jisikeng de fajue," *Kaogu* 1977.1, 30. The report does not describe the precise location of any of the remains. The implication is that the 15 unknown skeletons probably were also from wild or exotic, and thus unfamiliar, species.

[125] Anyang excavation team, "Anyang Yinxu nuli jisikeng de fajue," 31–32. The southern ramp was not fully excavated in 1950, because it extended into a modern burial ground, but the presence of horse pits was established. The excavation of the horses in pits S1, S2, and S3, including some harnessing implements, was completed in 1976.

[126] See below, 2.2.3; on the interpretation of WKGM1 see also the conclusions (section 5). The 1950 excavators described the animals as having been "buried above, beneath, to the left and to the right" of the humans. Guo Baojun, "1950 nian chun Yinxu fajue baogao," 22, simply refers the reader to the chapter on Shang history in the *Shiji* 史記, where the last, decadent king Zhòu of the Shang dynasty is said to have been "collecting an exceeding amount of dogs and horses as well as curiosities to fill his palaces" and "expanding his Sand Dune Garden Pavilion and acquiring wild animals and flying birds to put into them" (citing *Shiji*, "Yin ben ji," 104), echoing the Classical designation of the late Shang as decadent. But there is no indication that the burial was that of Zhòu, and the explanation is insufficient. The nature of the animal "curiosities" remains unclear (deer and monkeys, or perhaps more?). It cannot be determined if the high-status mortuary context included not only exotic curiosities but also wild indigenous animals.

[127] This may have been the tomb of Bi Wu, a queen of Wu Ding (but see K.C. Chang, *Shang Civilization*, 113–15; Yang Xizhang et al., "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," 14); also Anyang work team, "1969–77 nian Yinxu xiqu muzang fajue baogao," 115.

[128] 8 in M179, and 8 in M133, both to the east of the tomb; and one that was noted but not excavated, M256 (Anyang work team, "Yinxu 259, 260 hao mu de fajue baogao," plan 4, 8 and 15).

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tion. A severely damaged complete animal skeleton of unknown identity was also found.[129]

* M5, the famous Queen Fu Hao's 婦好 tomb, excavated in 1975–76, was located away from the other royal tombs at Xibeigang, immediately northwest of Xiaotun, in what may be an early cemetery area that preceded Xibeigang.[130] It had never been looted, and contained a vast number (1600+) of grave goods, such as bronze items (more than 400 items, out of which 210 ritual vessels, more than all that had been discovered before the war), and other precious artifacts. For the first time, the tomb occupant could be identified with a high degree of certainty: because about half of the inscribed bronzes bore the inscription "Fu Hao," the tomb is believed to be that of Fu ["Lady"] Hao, a queen or consort of the late Shang dynasty king Wu Ding. An important historical figure in her own right, she is mentioned in a number of known oracle bone inscriptions.[131] An elaborate house structure, with postholes and foundation stones, was found superimposed on the tomb, interpreted as a funerary structure constructed afterwards[132]—this is not seen at any other tomb, but such structures may have been obliterated post-depositionally. The skeleton of Fu Hao herself had not survived (indicating post-depositional destructive forces), but the wooden coffin and outer chamber were better preserved than in any other of the large Shang tombs at Anyang. 16 human offerings were found, at least one whom had been decapitated. Apart from some unidentified animal bone fragments, there were 5 dog skeletons. These were not directly associated with humans and not located under the tomb floor, but in the fill around the walls of the main tomb pit at the level of the upper lid of the coffin.[133] Associated artifacts included jade and ivory renderings of humans, tigers, elephants, buffalos, horses, deer, hares, birds, fishes, frogs, and other animals.

To summarize briefly, we note that the offerings made to accompany the deceased in all of the different types of Shang burials almost exclusively are domestic animals, as well as human beings (another "domesticate"). The mortuary program varies mainly in terms of the scale of sacrifices made, including of material goods, and the presence

[129] No identification was attempted, although the report suggests this was an in situ burial (Anyang work team, "Yinxu 259, 260 hao mu de fajue baogao").

[130] Zheng Zhenxiang, "Yinxu fajue liushi nian gaishu," 932. After the discovery, further excavations in the vicinity have revealed several structures and some sacrificial burial pits to the southwest, containing one to three decapitated humans. The large structure was believed to be a temple, since it lacked hearths or other features associated with inhabited structures. The area is believed to have held more large tombs, several of which have been looted in modern times (Anyang work team, "Anyang Xiaotun cunbei de liang zuo Yindai mu," *Kaogu xuebao* 1981.4, 491, 493, and 509, describe medium-sized tombs—on these, see above, 2.2.2.2). On Fu Hao's tomb see too Bagley, "Shang archaeology," 194–202.

[131] The name Fu Hao occurred in earlier inscriptions dated to two different periods, reigns of kings believed to have been separated in time by at least four other reigns, and the identity of the entombed person is still discussed. However, because the very basis for the dating of the later inscriptions (Dong Zuobin's period IV) has been doubted (they carry but few references to ancestor's names, an important guide to the date of inscriptions, and could be re-assigned to an earlier period on other grounds), the argument for the identity of Fu Hao as one of the queens or consorts of king Wu Ding (the fourth king of the late Shang Anyang period) is strong. See Zheng Zhenxiang et al., "Lun Fu Hao mu dui Yinxu wenhua he puci duandai de yiyi," 511; see also Institute of Archaeology, *Zhongguo kaoguxue zhong tan–14 niandai shuju biao 1965–1981* (Peking: Wenwu, 1983), 80.—On Fu Hao, see also 3.2.4.

[132] Institute of Archaeology, *Yinxu Fu Hao mu* (Peking: Wenwu, 1980), 4–6.

[133] Institute of Archaeology, op. cit., 8–9; plan on p. 13.

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of additional offerings of humans, too, correlates with increases in size and status. The offerings of living beings are of several distinct kinds, recurring in recognizable patterns within the mortuary program:

* Set offerings of domesticate animals' limb bones (pig, cattle and sheep), probably a burial sacrifice for the deceased.[134] Perhaps the rest of the killed animals was consumed by those attending funeral feasts. The set of limbs seems to have been offered to all main tomb occupants, including in the royal tombs, and appears to have been put down at the time of the burial (as exemplified in M1550, where it appears to have been put in place directly after the body was buried in the central chamber, clearly before the subsequent placement of human skulls in the ramp as the tomb was filled);
* Dogs, alone or alternatively included alongside human hound keepers, who themselves are treated as offerings in the program and whose presence become a further indicator of the status of the deceased;
* Offerings of human guardians, slaves or other followers, whose bodies are intact (thus presumably for a continued use in a function in the afterlife which was to be similar to their attachment or subordination to the higher-status tomb occupant during his or her life);
* Offerings of humans or parts of humans that have been mutilated through decapitation, and thus not intended for use in the afterlife; this is seen only in the highest-status or royal tombs;
* Additional offerings of animals, such as the scattered remains of animals in tomb fill, which can be hard to detect, identify, and interpret. Few are articulate, and while some may have constituted additional sacrifices made during the actual completion of the tomb, some such remains may also have been much later refuse accidentally included through looter's pits or other postdepositional forces, etc.

The last category is admittedly problematic, but together with the poor preservation of some human remains serves us well as a reminder that all of the Shang past may not become visible even in a well-established record of archaeologically recoverable features.

2.2.3 Offerings found in sacrificial pits

More than two thousand such pits have been discovered, about half at Xiaotun, and half at Xibeigang. As mentioned, "sacrificial pits" or *jisikeng* are not primarily burials

[134] This set of offerings may correspond to the oracle-bone graph *lao*, which on the basis of Zhou and Han texts traditionally has been believed to be a sacrifice using cattle, sheep and pigs, often directed to the ancestors. But it has been unclear in what form, and some scholars appear to have taken the lack of any joint sacrificial pits for cattle, sheep, and pigs (similar to those of dogs and sheep or sheep and cattle) to indicate that the traditional interpretation was mistaken. See Yao Xiaosui, "Lao, yang kaobian," *Guwenzi yanjiu* 9 (1984), 25–36. On the range of Shang sacrifices also see Zhang Bingquan, "Jisi buci zhong de xisheng," *Bulletin of the Institute of History and Philology* (Academia Sinica, Taipei) 38 (1968), 181–232, the best overview of the variation and patterning in the offerings of domestic animals.

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but separate pits containing sacrificed items, offerings, but no primary tomb occupant. They are not tombs in themselves, and are found in spatial association either with the architectural remains at Xiaotun (below, 2.2.3.1), where they are either expressions of rituals connected with the construction of the architectural structures (such as when a dog is buried under a building foundation corner stone, etc.); or, in a more general way, associated with mortuary sites such as the royal tombs at Xibeigang (below, 2.2.3.2) where the mortuary program obviously was more complex and wide-encompassing than for simpler burials. Especially in the case of the latter type of sacrificial pits, which includes the special case of the chariot pits, they too, like the tombs, may contain large numbers of animal or human offerings. Thus, and notably because of their general spatial association with the Shang center and the highest-status tombs there, the sacrificial pits reviewed here (even when they are not in immediate association with any burials) may also be regarded as an extension of the "additional offerings" described above.

2.2.3.1 Sacrificial pits at Xiaotun

A large number of "sacrificial" pits containing human and animal remains, have been found inside or in the immediate vicinity of the architectural remains of the Xiaotun area, beginning during the pre-war excavations.[135] As explained already, they are interpreted as "sacrificial pits" because of their location, and the large numbers of buried animals and humans which they contain, including the large numbers of whole animals in groups, and decapitated humans. The presence of such pits has, in turn, reinforced the interpretation of these structures either as "temples" or royal palaces, or both. In area B and C at Xiaotun Locus North, a large number of these pits were found in the vicinity of, and clearly related to, the structures.[136]

Among the sacrificial pits, the chariot pits, which often include both chariot remains, horses, and horse keepers, must be mentioned as a special, exotic category. Chariots are clearly used by the king, as attested in the oracle bone inscriptions, but should also be regarded as an element of social display which (like oracle bone divination itself) also may have been used by wealthy, medium-status figures subordinate to, but outside of, the royal court.[137]

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[135] An overview is found in Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang* (Nankang, Taiwan: Academia Sinica, 1970), 5–6, general plan on p. 7. Note that Shih Chang-ju's several reports (Shih Chang-ju, 1970, 1972, 1973) mention the "Northern," "Middle," and "Southern" sections (the latter with only a single pit); these labels refer only to portions of the important burial area associated with structure B7 within area B.

[136] In area A, in contrast, only two such pits were found outside of the architectural foundations there and none in their immediate vicinity. The latter have not been fully described. (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*, 6; K.C. Chang, *Shang Civilization*, 92).

[137] Chariots were unexpected, and the techniques of exposing them by the "shadow" traces of wooden parts was developed only in the course of the excavations. One may suspect that chariot remains, victims of postdepositional decay, had been present in at least some pits cited with 2 and 4 horses respectively (sets corresponding to the numbers seen in chariot burials later). On horses, chariotry and Anyang chariot remains, see also Shih Chang-ju, "Yin che fuyuan shuoming," *Bulletin of the Institute of History and Philology* 58.2 (1987), 253–80; E. Shaughnessy, "Historical perspectives on the introduction of the chariot into China," *Harvard Journal of Asiatic Studies* 48.1 (1988): 189–237; Lu Liancheng, "Chariot and horse burials in ancient China," *Antiquity* 67.257 (1993), 824–38; Institute of Archaeology, *Yinxu de faxian he yanjiu*, 138 ff.; and further examples cited by Okamura Hideki ("In-Shû jidai no dôbutsu kôgi," 47–51). Okamura argues that such offerings away from the center may also have been done as local noblemen's sacrifices (as opposed to those performed for the royal court). See also Bagley, "Shang archaeology," 202–208.

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The most famous concentration of sacrificial pits is that found in area B, outside of building structure B7.[138] Several aligned clusters of pits were found immediately south of B7, suggesting an intentionally designed whole. In the immediate vicinity, there was also a bone-working workshop where several hundred pieces of raw material and arrowheads were found.[139] The pits have been divided by scholars into northern, middle, and southern sections.[140] In the southern section there was only one burial, the medium-sized tomb M232 mentioned above. In the northern section, there were 49 sacrificial pits, centered on five chariot pits.[141] Of these, only two were more or less undisturbed (M20, M40), yielding weapons and other artifacts (chariot fittings and decorations). In M20, the remains of four horses were buried at the deepest level, a chariot had been buried over them, and three humans (interpreted as the remains of charioteers, armed with arrows etc.) buried last.[142] M40 held the remains of three humans with two horses (again, horses were buried first; the interment suggests the humans' functional attachment to the horses), together with cowrie shells, weapons, and other artifacts.[143] East of these chariot pits were 27 more pits, holding a total of 125 decapitated humans, four to seven individuals in each, sometimes represented only by the skull. None of the human sacrificial pits contained animal or other burial offerings, except in one case (M86) where one of the five bodies apparently had not been decapitated and wore remains of a shell head-band. The only other buried person here that had not been beheaded was a single, extended human burial of the low-status type. Just to the west, however, there were two child burials, two flexed adult human burials in an upright sitting position, one more extended (prone) adult human burial, two burials with humans believed to have been companions or guardians of stored goods,[144] and a

[138] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*, 1970, general plan on p. 7; later he provided a new final tabulation of the pits of the B7 area (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san. Nan zu muzang fu bei zu buyi*, 1973, 84; it supersedes the tabulation on p. 409–11 in Shih's 1970 report). The remains are highly complex, but judging from their distribution it still seems that the majority really represent some form (or forms) of Shang rituals connected with the site of the buildings.

[139] K.C. Chang, *Shang Civilization*, 98 (quoting Guo Baojun, "B-qu fajue ji zhi yi," 594).

[140] The grand design seems plausible but it is somewhat unclear why the middle and southern sections must be associated with B7 (they also seem associated with B10 and B12).

[141] These were themselves further subdivided into left (=west), right (=east), and "front" (i.e., south) (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*, 10, 12). Shih regarded the Shang outline as a buried military formation in which structural deficiencies as mistakes on the part of the Shang dynasty architects (Shih Chang-ju, op. cit., 13). But even if it can be assumed that these 49 burial pits were indeed contemporaneous and part of a large design (most pits were oriented north, they tend to cluster, the chariot burials are concentrated, etc.), preference for symmetry may not have been solely responsible. Contemporary events may have influenced the design of the burial area in other ways (for example, if divination had indicated it inauspicious to follow a "perfect," symmetrical design). The heterogeneity may also indicate that all pits were constructed successively, over time.

[142] See the schematic plans (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*), 22,24–25.

[143] M40 cut several earlier pits and was partly destroyed by a later pit (the stratigraphy is discussed in detail by Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*, 162–66).—The three other chariot pits were M45, M204 and M202, all severely disturbed by later (historic) burials. Only M202 yielded articulated skeletal remains, again, three humans plus two horses, in a similar arrangement (plate 197 shows M202). M204 had some scattered human and horse bone, the number of individuals remains unclear.

[144] These "goods burials," M238 and M242, were located adjacent to each other in the SE corner of the area (as defined), and contained five and seven humans each, but the excavators believed the skeletons were secondary to the buried goods, perhaps from people buried to function as guardians of the many bronze vessels and other objects that had been put into the pits.

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sheep pit. A few of these human burials contained ceramic grave goods; none had animal remains. Another independent sheep pit (M182) was situated at the north-eastern edge of this area, as defined by the excavators. It held ten whole sheep oriented west (their legs pointing alternately north and south).

In front (south) of the above-mentioned chariot burials there were five heavily disturbed pits with five humans in each, and three other burials oriented east-west instead of north-south. Only the latter had any grave goods; none had any animal remains. Two of the humans seemed to have been bound, one with the arms behind the body and the other in front. Shih Chang-ju noted the parallel with Shang ceramic figurines unearthed in pit H358 depicting slaves or prisoners-of-war, also known from the oracle bone inscriptions.[145]

Two other pits in the B7 northern section (M209 and M210) were the only separate pits for a single pig and for birds, respectively, seen in all of the pre-war excavations.[146] M209 was initially lumped together with a pit containing more pigs (all buried complete), but it was later recognized as a separate single-pig burial pit.[147] M210, also a small burial pit, contained only bird bones.[148]

The B7 middle section pits were clearly part of a planned layout, centered on human sacrifice. They were laid out in twelve long north-south rows with a total number of 80 pits,[149] most of which contained only human skeletons, numbering from 1 to 13 in each, most often 6–8, often red-colored, divided into groups facing opposite directions (east or west). Almost all had been beheaded before burial, sometimes with a cut through the mandibles, often with the skulls placed at the foot end of the bodies (as in M161, M180 etc.). There were no animal offerings and rarely any other grave goods.[150] A separate animal pit (M152) contained 3 dogs, and 3 sheep superimposed on the dogs.[151]

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[145] In M188; there were also a number of Shang-style bronze vessels Shih Chang-ju (*Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi yi. Bei zu muzang*, 350). The oracle graph in question is transcribed 執 *zhi* (on this example of cross-fertilization of archaeology and paleography, see Liu Yiman, "Kaoguxue yu jiaguwen yanjiu," 2–3). See too Mary H. Fong, "The origin of Chinese pictorial representation of the human figure," *Artibus Asiae* 49.1–2 (1988/89). Apparently females had their arms joined in front, and the males on their back.

[146] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san. Nan zu muzang fu bei zu buyi* (1973). Shih noted that the pig pit was not just the only of its kind, but its construction within a larger pit was also unlike other animal pits with cattle, dogs, or sheep ("Henan Anyang... dongwu guhai," 12). Post-war excavations yielded more examples.

[147] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi san. Nan zu muzang fu bei zu buyi* (1973), 76, 79 pl. 51; on the very complicated stratigraphy, see p. 74 ff.

[148] Six unidentified long bones were present, thus three birds may have been buried here. There is no information regarding the side of the bone (siding them could potentially double the minimum number of individuals). No skulls were found.

[149] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi er. Zhong zu muzang* (Nankang, Taiwan: Academia Sinica, 1972), plans found on p. 2, and p. 4, pl. 1.

[150] The following are exceptions: In M162, a grave with six humans, three small bronze bells were found; in M145, six such bells; in a number of graves there were small shell discs. In one pit (M351) there were remains of wooden shields. One grave (M169) containing eight humans included a lone pig mandible. M164 was a lone, anomalous single human burial, not decapitated, with rich burial goods including various weapons and two dogs, one each at the southern and northern end of the pit. In addition an entire horse (juvenile?) equipped with a harness was buried on top of the human remains (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi er. Zhong zu muzang* [1972], 9; 24–25, pl. 2). Horse chariot burials elsewhere often had either two or four horses buried with three humans, but no accompanying dogs.

[151] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi er. Zhong zu muzang* (1972), 38–41, plate 13.

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Inside 10 out of the twenty-one structures within the foundations labelled area B were Shang sacrificial pits that either predated, or postdated the buildings. In all, 62 such pits were discovered, with 60 humans, 96 dogs, 98 sheep and 41 bovines:[152]

* B7: Inside this structure were several pits with human offerings,[153] and several single-dog pits directly below its foundations.[154] Immediately outside of the buildings, more animals were found buried in the same way (below the beginning of rammed earth layers, or within them). Shih Chang-ju believed these animals were sacrificed and buried at various stages of the construction of buildings supplementary to B7. They include M230, with five near-complete bovine skeletons (described as short-horned, small cattle) all oriented either east or west, and always reclining on their left side; M229, severely disturbed but containing 1 dog and 2 sheep, also oriented east-west; M96, with 3 bovine skeletons, all oriented east; and M106 with 11 dogs and sheep;[155] M141, with 2 dogs and 1 sheep; M94, again with 2 dogs and 1 sheep; M105, where remains were very badly preserved but 4 sheep and 3 dogs were identified; M140, with three bovine skeletons, oriented south (in this pit, there were traces of a mat on the floor of the pit); and finally M168, with a single flexed human burial, in an upright, kneeling position. There were no grave goods in this or any of the other burial pits (with the exception of the trace of wooden remains in M168, which had been cut into from above by a storage pit containing oracle bones, the inscriptions of which were tentatively dated to the time of the very last Shang kings.[156] In all, 1 human, 11 bovines, 13 dogs and 14 sheep were buried in sacrificial pits within the small area of structure B7.[157]
* B8: several dog pits, apparently building foundation offerings.[158]
* B11: several "upper" burial pits with single humans only, within the later parts of

[152] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang,* (Nankang, Taiwan: Academia Sinica, 1976).

[153] These pits included M124, where three humans oriented westward were accompanied by two likewise oriented dogs, one above the northernmost human's head, and one immediately north of the southernmost human (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang,*[1976], 48–52). This pit is thought to be related to another (M149), where the two buried persons are oriented eastward (facing M124), and possibly related to a nearby gate, interpreted by Shih Chang-ju by quoting a later text (Zhou li, "Tiangong" chapter, where gate guardians of the king's harem number five and are placed on each side of the gate facing each other [Shih Chang-ju, op. cit., 52]).

[154] M138, M139, and M147 (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang,* [1976]), 68–72.

[155] The excavators had difficulties distinguishing dog or sheep remains, but counted 5 dogs (all oriented east) and 6 less well preserved sheep.

[156] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang,* (1976), 102.

[157] Shih Chang-ju, op. cit., 72–105 (fig. 32, after p.72, is a plan of all these pits).

[158] Similar ones were found in structure B9: M207, with five dogs buried in a rectangular pit located under one of the foundation stones of this structure. One dog in the northern part facing east, three in the middle all facing south, and one badly preserved skeleton in the southern part, facing west. All except the last one clearly were on their left side. M241, just outside structure B8, contained three dogs (also facing south, arranged in a row one headlength after another) (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang,* [1976], 113–17). M246 and M254 both were burial pits with only one dog each. B9 itself is not as well-defined as structure B8, but the dog burials were clearly located on each side of the structure (Shih Chang-ju, op. cit., 121–24).

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the structure.[159] The only pit with animal remains was M280, which contained a single human with a dog.

* B13: In addition to one single human burial, this structure contained a series of 7 large animal burial pits with large numbers of dogs, bovines, and sheep arranged in rows, lacking in any other grave goods or offerings. The excavators suspected that two more pits may have existed in the central part of the structure but had been destroyed by recent well-digging. These pits were: M363, located under two foundation stones, with 17 sheep, all oriented to the north, and described as arranged in three rows.[160] M390, alongside and under a row of five foundation stones, held the remains of 30 bovines and 3 sheep. The bovines were mostly oriented north, but were in considerable disorder. However, most had bent forelegs and stretched hind legs, indicating that they were buried post-mortem. The three sheep skeletons were located under the bovines farthest east.[161] M368, an elongated rectangular pit similar in layout to M390 (but not located beneath any foundation stones), had 10 dogs in the western part, and 10 sheep in the eastern part, alternating in orientation north and south. According to the excavators, there was visible variation in the size of the buried animals within each species.[162] M364 had at least 20 dogs and 10 sheep arranged in rows; again, dogs on the western side, and sheep on the eastern side of the pit. M401 had 10 dogs and 10 sheep in a northern and a southern row, with five of each in each row; all animals in the northern row oriented north, and all in the southern row oriented south.[163] M380, on the northern border of B13, held 20 dogs and 31 sheep; the pit was partly destroyed (the original number was probably higher). In this pit, dogs and sheep were intentionally mixed, not arranged separately as in the other pits. M356, at the western entrance of B13, contained only the skeleton of a human child, at a short distance the skeleton of one dog; both oriented north.[164]
* A few other smaller structures contained similar sacrificial pits, smaller in scale: M255 in B16 with one dog and three sheep, all oriented south.[165] In B19, M348 with a single dog skeleton, oriented south. In B20, four more single-human pits.[166] Similarly, in B21 (a small, square structure located within the much larger B20), there was only one dog burial.[167]

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[159] These include M297, where the body had been buried vertically on its head in a pit constructed between two large postholes related to the structure. Two earlier burials (M245, M299) both were close to the gates of the structure, and each contained the remains of a human child (M245 also a few stone implements) (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang*, [1976], 127–70; plan on p. 139).

[160] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang*, (1976), 180, pl. 66.

[161] Shih Chang-ju, op. cit., (1976), 187,193; pl. 67–70.

[162] Shih Chang-ju, op. cit., (1976), 203.

[163] Shih Chang-ju, op. cit., (1976), 222.

[164] Shih Chang-ju, op. cit., (1976), 237–39.

[165] Shih Chang-ju, op. cit., (1976), 244.

[166] M335, M389, M411 and M414. Tomb M335, under a conspicuous foundation stone, was less well preserved but accompanied by some grave goods including a stone knife and many shells, but no dog; M389 was in a kneeling position, lacking grave goods; M411 included a companion dog; and M414, under foundation stones, was arranged in the same way and accompanied by one dog, a stone knife, and some shells.

[167] M415 (Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi si. Yi qu jizhi shang xia de muzang*, [1976], 259).

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The C area or building complex was a smaller cluster of structures located to the southwest of the largest complex, B. As in previous reports, the report on sacrificial pits describe first those located outside (i.e. north of) the building foundations,[168] and then those within the confines of the foundations.[169] Outside and north of these foundations, apart from the highly interesting medium-sized tombs described above (2.2.2.2), were four sacrificial pits with nothing but animal remains (the pits may have been related to the burials, but are described here).[170] The shallow pit M357, just south of the tombs, contained the remains of 41 dogs and 42 sheep, in four rows, predominantly oriented south.[171] Preservation was poor, and figures were probably higher, in both cases. In addition, the report mentions a total of 338 animal bones and fragments located in the adjoining pit H354, which should represent "at least five animal bodies"; in addition, there were 25 dog and sheep jaw bone fragments, which "could represent five animals,"[172] and 130 postcranial bones in M383 (situated below M357),[173] Finally, there was M410, a small pit with just one sheep; M383, five sheep and one dog;[174] and M382, 4 dogs and 4 sheep all oriented south, the dogs placed around them as if "protecting" the sheep.

* At the area C complex, a total of 17 units, ten contained sacrificial pits within the rammed-earth structure foundations themselves. The largest structure, C1, encompasses C2 and C3, and most of the pits found in area C were located within its borders[175] (the review of pits within the structures in area C is limited to this unit). There was a series of pits containing human remains, none of which had any grave goods or animal offerings;[176] and seven separate animal pits: M338, a two-layered pit which may represent two subsequent animal offerings: the lower layer (about 20 cm beneath the upper layer) contained five sheep and one dog; the upper layer held two sheep and three dogs, plus a number of further, unidentified fragments;[177] M339, inside the rammed earth foundation of C1, with only three badly preserved sheep skulls, and limb bones; M377, a total of 20 dogs, divided on small and big specimens.[178] The last four pits (MA, MB, MC and

[168] Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: bing bian. Yinxu muzang zhi wu. Bing zu muzang—shang* (Nankang, Taiwan: Academia Sinica, 1980), plan on p. 6.

[169] Shih Chang-ju, op. cit. (1980), 416–18; for a general plan, see p. 3, and 419; also table on p. 414.

[170] Shih Chang-ju, op. cit. (1980), 271–311. Shih Chang-ju assigned all these pits to the Shang dynasty because of how they all apparently belonged to an intentionally designed burial area (Shih Chang-ju, op. cit. [1980], 309–10). The pits are indeed organized in a consistent pattern. Artifacts in the neighboring medium- and low-status tombs offer additional support.

[171] Shih Chang-ju, op. cit. (1980), 271–99, pl. 188–92.

[172] Shih Chang-ju, op. cit. (1980), 296.

[173] Evidently, inadequate methods for estimate of individuals were used (on methodological issues, see too 2.3.1).

[174] Shih Chang-ju, op. cit. (1980), 273 on stratigraphic position, 300–301 on the contents.

[175] General plan, Shih Chang-ju, op. cit. (1980), 313. All the burials and other pits within C1 are tabulated on page 374; overview plan of C1 on p. 375.

[176] M358, M361 and M365 were all small square pits in a row in the southern part, with three humans in each. In the first two, the bodies had clearly been decapitated before burial, in the third, preservation was too poor for this to be determined. M354 and M375 contained 3 decapitated humans each. M366 contained twenty humans buried in a largely rectangular pit. All had been decapitated, with the skulls buried together with the postcranial skeletons. The bodies had been buried in two layers, the lower layer oriented east, and the upper towards the east. The skeletons were well preserved (the report notes that they were all collected, and stored at Anyang [Shih Chang-ju, op. cit. (1980), 340]—they are now probably in Taipei).

[177] Shih Chang-ju, op. cit. (1980), 354; plan, p. 351.

[178] Shih Chang-ju, op. cit. (1980), 364.

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MD), previously described as ash pits, since they contained burned bone, have been redesigned. The content of each such feature is unclear, since only obviously articulated skeletal materials were recorded: In pit MA, a string of bovid vertebrae; MB: a bovine horn (core?); MC: disarticulated large limb bones (bovine?), believed to have been cut at the joints and burned (or cooked?) with the flesh still in place; finally, in MD, which was situated beneath M377 (above) there was a cluster of articulated bovine (?) limb bones; one was stuck inside a ceramic vessel.[179]

* Within the same C complex, there were also several other pits with burned animal bone fragments, believed to have resulted from some ritual activity.[180] For example, H314, associated with C3, contained unidentified animal limb bones.[181] These remains may either have been food refuse, or indicate that area C was some form of "processing point" or temple for the preparation of sacrificial animals or the supply of raw material for divination, but at present neither possibility can be confirmed.

2.2.3.2 Sacrificial pits at Xibeigang

Apart from the large royal tombs, excavations at Xibeigang have also revealed a large number of sacrificial pits.

The total count of such Shang-era pits discovered during the pre-war work at Xibeigang was 1,221. Of these, 1,117 were in the eastern part, and only 104 in the western part;[182] 439 were undisturbed, 419 partly disturbed or destroyed, 188 had been emptied by looters, and 175 were left unexcavated (because they were suspected of having been looted already[183]). Kao Ch'ü-hsün summarized data from 643 largely intact pits, mostly leaving out specific data on form, size, depth and orientation (some were apparently quite uniform: rectangular shape, and northward orientation).[184] They fall into human, animal, and artifact pits. On the basis of the spatial arrangements in groups (nine such groups in the eastern part, one in the western part) and long rows, it was concluded that these pits must be intentionally related to the large royal tombs.

Sacrificial pits containing human remains were apparently mixed with both low-status burials, and multiple burials of people not mutilated as purposeful sacrifice, and thus not interpreted as "sacrificial" by Chinese archaeologists. This highlights the uncertainty involved in these distinctions, since, obviously, in the hierarchical Shang social context, such burials may also be people that were killed and buried to supplement, as offerings, the main deceased in larger, royal tombs nearby.

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[179] The vessel was of a type often included in a set seen in other Shang dynasty human burials (Shih Chang-ju, op. cit. [1980], 371).

[180] Shih Chang-ju, op. cit. (1980), 312; ref. to Shih Chang-ju, *Xiaotun yizhi de faxian yu fajue: yi bian. Jianzhu yicun* (Nankang, Taiwan: Academia Sinica, 1959), 171–73, 306.

[181] Shih Chang-ju, op. cit. (1980), plan, p. 376.

[182] For the eastern part, see map by Yang Ximei (1970, pl. 13), reproduced in K.C. Chang, *Shang Civilization*, 120. Generally, on these pits and the human offerings, see too Bagley, "Shang archaeology," 192–94.

[183] Kao Ch'ü-hsün, "The royal cemetery," 5 ff.

[184] Kao Ch'ü-hsün, op. cit.

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Among these burials/sacrificial pits, single-occupant human burials where the occupant lacked visible mutilation included grave goods in 58 out of a total of 131 documented cases, including pottery, bronze vessels, weapons, etc., and in some cases (number unspecified) animal offerings such as bovine limbs and complete dogs. Second, there were burials of multiple humans who had not been mutilated (57 in all, ranging from 2 to 11 skeletons), which also contained similar grave goods, but no animal offerings. Third, pits with mutilated humans: postcranial skeletons lacking skulls (192 in all, 1 to 10 skeletons in each pit; found exclusively in the eastern part of the Xibeigang cemetery area) and also skull burials without any postcranial remains (a total of 209, with 3 to 39 skulls in each pit). Here grave goods were rare, and no animal offerings were reported.

The animal remains seen in these different kinds of pits are subdivided into three categories:

* First, 20 horse pits (13 in the eastern, and 7 in the western part). The number of horses buried was identified in only 16 of these (ranging from 1 to 4 horses; one containing 37 horses).[185]
* Second, 2 elephant pits in the western part of the cemetery area, both relatively deep.[186] One contained a juvenile elephant, oriented west, and the other a large elephant oriented north, accompanied by one human, interpreted as an elephant tender, a *mahout*.[187]
* Third, 12 unidentified "animal pits," all located in the eastern part of the cemetery.[188] The only observations on this third group were made in the field: they included two monkey skeletons; eight of the twelve pits contained only mammal ("animal") bones; 3 held a mixture of mammal and bird bones; one contained nothing but bird bones.[189] No grave goods were recorded from any category of these animal pits.

In 1976, further large-scale excavations were carried out in the eastern part of the Xibeigang cemetery. More than 250 sacrificial pits, mostly with multiple human offerings, were found southwest of WKGM1 between M1400, WKGM1 and M260; 191 were excavated. On the basis of pottery and other grave goods discovered in only a small number of the pits, an early Yinxu period date was ascertained.[190] The

[185] Kao Ch'ü-hsün, "The royal cemetery," 8–9. Only one chariot was located. It contained no horse remains. Bronze fittings from an estimated six chariots were found.

[186] The depth was over four m. below the surface, as opposed to a maximum depth of three for any horse pit. There is no further stratigraphic information.

[187] Kao Ch'ü-hsün, "The royal cemetery," 8. In his review of the pre-war work at Anyang, Hu Houxuan only mentioned one of these two elephant pits (the one with the accompanying human elephant keeper, an "elephant slave" [Kao Ch'ü-hsün, *Yinxu fajue*, 89]). This has misled many scholars interested in the role of the elephant in oracle bone inscriptions, such as Wang and Yang 1982, whose only source for pre-war remains was Hu, and who thus ignore the additional juvenile elephant found in 1935 and mention only one pre-war elephant pit, along with the one discovered in 1978 in the same area (on the elephants see too below, and fig. 1, p. 48).

[188] Regrettably, these unidentified animal remains were later all lost. They were first shipped to Nanking, but left behind in the face of the Japanese invasion.

[189] Kao Ch'ü-hsün, "The royal cemetery," 8–9. On bird remains from postwar work at Xiaotun, see Hou Lianhai, "Ji Anyang Yin xu zaoqi de niaolei," and 2.2.1.

[190] Yang Xizhang and Yang Baocheng, "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," ***Kaogu*** 1977.1, 14.

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total number of humans was 1,178 (or higher), each pit mostly containing between 8 and 10 individuals. The report offers interesting information on the human skeletal materials, indicating that mainly young males were used.[191] The excavators interpreted most pits as sacrificial, but in contrast with pre-war excavators they did not believe them to be directly related to any royal tombs, i.e. they were not thought to have been offerings made for the occupants of those tombs at the time of their burial, but were seen as sacrificial pits constructed according to cycles of ancestral sacrifices only indirectly related to the royal tombs. Thus, they were construed as material evidence for the veracity of Shang oracle bone inscriptions describing recurring human and animal sacrifices addressed to royal ancestors. However, it was still suggested that a few might be sacrificial burials directly related to the nearby tombs of WKGM1, 1400, or the Simu Wu tomb.[192]

Only five of the Shang pits excavated in 1976 yielded animal remains: M3, a single, complete pig; M98, 10 dogs and 3 humans (not decapitated, possibly dog keepers); M99, badly preserved dog remains; M110, two horses, their heads adorned with bridles; and M217, a burial pit with a single human accompanied by five birds, probably eagles, or falcons, with their falconer.[193]

Also, horse pits (either with horses buried alone, or with their keepers), have been discovered outside of the immediate palace area.[194]

A second major excavation of sacrificial pits was undertaken in 1978. 40 pits, out of the 120 that had been defined, were excavated. Unlike the above pits, they were located in between and slightly to the south of the two groupings of royal tombs.[195] Yet another elephant pit was found, containing the remains of one elephant, and a pig. The elephant was juvenile, only 2 m long and 1.6 m high, and no tusks); a bronze bell was still attached, an indication that it most likely was tame, perhaps a pet, or even domesticated.[196]

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[191] All decapitated skeletons from the 1976 excavations appear to have been from young adult males, except a few juvenile-to-adult males. This same seems to have been the case in pre-war human remains from the same area. The table summary of the human skeletal evidence in Yang Xizhang et al., "Cong Shangdai jisikeng kan Shangdai nuli shehui de rensheng," 33–36, is superseded by Inst. of Archaeology, "Anyang Yindai jisikeng rengu de xingbie nianling jianding," *Kaogu* 1977.3, 210–14; the latter presents further data on the sex and age of humans, but nothing on animal remains. See too Huang Zhanyue, *Zhongguo gudai de rensheng renxun* (Beijing: Wenwu, 1990), 41–78. Only among those not beheaded before their burial were there any female adults, or juveniles. In the young adult males, a high frequency of abnormal bone condition in vertebrae and other pathological changes (not described) were observed and taken as further proof of the exploitation of the slave class (Anyang work team, "Anyang Yinxu nuli jisikeng de fajue" [1977], 29–30). This is a premature conclusion, given the lack of comparative materials from non-slave people.

[192] Anyang work team, "Anyang Yinxu nuli jisikeng de fajue," 29–30.

[193] Anyang work team, "Anyang Yinxu nuli jisikeng de fajue," 24, 26; fig 4:3 and 4:5, pl. 2.

[194] One example, pit H33 with 1 horse, 3 adult humans (one accompanied by a pig head offering) and 2 children, is described from the 1973 excavations at Xiaotun Locus South (Anyang work team, "1973 nian Xiaotun nandi fajue baogao," 62–63). For more examples, see Anyang work team, "Anyang Guojiazhuang xinan de Yindai chemakeng," *Kaogu* 1988.10, 882–93; "Henan Anyang shi Meiyuanzhuang dongnan de Yindai chemakeng," *Kaogu* 1998.10, 48–65; etc.

[195] Map, Anyang work team (1987b), "Anyang Wuguancun beidi Shangdai jisikeng de fajue," 1062.

[196] Anyang work team, "Anyang Wuguancun beidi Shangdai jisikeng de fajue," 1065–1066; Wang Yuxin and Yang Baocheng, "Yinxu xiangkeng he 'Yin ren fu xiang' de zai tantao," in Hu Houxuan et al., *Jiagu tanshilu* (Peking & Hongkong: Sanlian, 1982), 467; 476. S.J. Olsen writes, in "The Asian Elephant, *Elephas maximus*, and Chinese culture," *The Explorer's Journal* 72.1 (1994), 34, that it is not clear whether the animal buried with this elephant was a pig or a dog, and all bones from this pit have now been lost. Some post-war juvenile elephant bones are still extant at Anyang (Yang Xizhang, personal communication, Anyang field station, September 1993).

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The additional building foundations recently excavated at Xiaotun, in 1989–91, seem to date to the early part of king Wu Ding's reign. They also contain several human sacrificial pits, the most important of which are associated with a structure named F1, which is more than 60 m long, with gateways lined with pebbles, and ten human sacrificial pits (M2–3, M14 through 21) arranged in rows underneath with at least 29 decapitated victims. These offerings apparently included no animals, but in a number of pits smashed ceramics and bone arrowheads had been included as further offerings. These human offerings may have had higher status than many seen in earlier excavations.[197] Moreover, as mentioned, recent years have seen yet further discoveries of architectural remains, including, since 1999, the newly discovered Middle Shang city wall remains and building foundations north of the Huan river. At these structures, which predate the previously known late Shang Anyang remains, the associated sacrificial pits seem similar to those seen at Xiaotun. Those described so far have been pits with whole dog skeletons and pig skulls, as well as dog-sheep pits, and pits containing mutilated human remains, placed in front of an early palace structure.[198]

This concludes the overview of relevant data culled from archaeological reports. I now turn to the reported results of the identification and analysis of the excavated Anyang faunal remains, summarizing what we know about which animals were present, as well as the problems inherent in the record as assembled and analyzed so far—before turning to the oracle bones, and their contents (in Part 3).

2.3 Faunal analysis and the Anyang animal remains

2.3.1 The legacy of early research on Anyang faunal remains

The mammal remains excavated at Anyang during the "early period"[199] were first examined in detail by the two paleontologists Pierre Teilhard de Chardin and C.C. Young (Yang Zhongjian), on behalf of the Academia Sinica.[200] Despite serious flaws, their account has often been used as a standard reference on Anyang animals. It was compiled by scholars who did not take part in any excavations, and in the manner of early, unsophisticated research on animal remains, they obviously also had no influence on the research design of the excavations. Their conclusions and, more seriously, methodological assumptions have continued to influence post-war research. The re-evaluation of Teilhard and Young's work is necessary to any attempt to reconstruct Anyang fauna—obviously not just for zooarchaeology, but for general Shang archaeology.

[197] These pits may be compared to the pits seen at structure B20 discovered in the 1930s, at a distance of 80 m. from F1. See Anyang work team, "Henan Anyang Yinxu daxing jianzhu de fajue," (2001), 18–26.

[198] Anyang work team, "Huanbei Shangcheng de kaogu xin faxian" (2003), 55, 58–59.

[199] The period 1928–1936 (cf. Li Ji, *Anyang*, 106).

[200] Teilhard and Young, "On the mammalian remains from... Anyang" (1936).—Faunal remains from the area had been studied before, by the Japanese paleontologist Matsumoto, who believed the deposits from which his specimens came were much older (Pleistocene) than the actual age.—Teilhard and Young, op. cit., 54; H. Matsumoto, "On some fossil mammals from Honan, China," *Scientific Report of the Tohoku Imperial University* 3.1 (1915), 1–28, pl. 1–10. Teilhard and Young rejected some of Matsumoto's identifications (which were also not based on excavated materials).

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This task is especially important in part because of the absence of the full archaeological reports on animal remains from Anyang originally planned by Liang Siyong, and in part because of the continued lack of attention to the precious information that can be derived from such remains. Zooarchaeology and biological archaeology is too important to be left to specialists alone!

Reflecting their own times and scholarly background, Teilhard and Young's study contains short descriptions of the morphology of selected "typical" specimens, along with identification to scientific species, taken as far as was possible. It was presented in the species-list format familiar from early "zooarchaeology" worldwide, heavily influenced by the paleontology of their day. Indeed, their foremost interest was paleontological—that is, as opposed to archaeological: there was little or no discussion of the nature of the sample (how representative it might be, etc.); little or nothing is noted on the precise micro-stratigraphic context, or on the variability of the animal remains in relation to other data; in short, there is little interest in investigating animal-human relations from an archaeological perspective.[201] Instead, a single "Anyang fauna" is established, at most compared to earlier Pleistocene faunas, but almost not at all related to, or used to explain, aspects of Shang society.

As an example of the consequences, consider the approach to the ubiquitous Anyang dog remains. There is no discussion of what the qualitative and quantitative nature or distribution of such remains might tell us about the Shang—in contrast, we can assume that this would have been a prominent topic of Liang Siyong's intended reports. Teilhard and Young will simply note that "there is no reason... to assume that our specimens belong to modern animals... accidentally buried in the archaeological deposits,"[202] and so, part of the "Anyang fauna."[203] No analysis of the dogs' importance is offered, apart from that it belongs on the species list. When Teilhard and Young mentioned the need for more study of non-archaeological faunal assemblages in contemporaneous deposits, they did so only to help resolve remaining taxonomic issues by means of controlled comparison between cultural and non-cultural faunas, not to promote cultural analysis.

The interpretive aims stated by Teilhard and Young did not extend far beyond their basic interest in taxonomy, but they did hope to make inferences from the faunal data about the general climate of the Anyang area in Shang times (by relating the various discovered animal species to their presumed climate preferences, and to their present-day geographical distribution); and, also, searching for evidence of long-distance trade contacts, whereby exotic species could have been introduced into their "Anyang fauna." And yes, while much of the information potential of the data will

[201] That is, "...the use of faunal analysis for the study of past human culture rather than the study of mammalian osteology using remains from archaeological sites" (P. Bogucki, in Pam J. Crabtree et al., eds., "Animal use and cultural change," *MASCA Research Papers* 8, supplement [Philadelphia: MASCA, University of Pennsylvania, 1991], 119).—For overviews of contemporary international zooarchaeology, see Richard G. Klein et al., *The Analysis of Animal Bones from Archaeological Sites* (Chicago: University of Chicago Press, 1984); Simon J. M. Davis, *The Archaeology of Animals* (New Haven: Yale University Press, 1987); Elizabeth J. Reitz et al., *Zooarchaeology* (Cambridge: Cambridge University Press, 1999).

[202] Teilhard and Young, "On the mammalian remains from... Anyang," 7.

[203] Because of the morphological proximity of the specimens to modern Chinese domestic dogs and the resulting suspicion which might arise on the part of other paleontologists, that "contamination" by even more recent or "modern" materials had occurred.

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necessarily remain unexploited, these types of concerns indeed may still be considered on the basis of "species list" zooarchaeology: basic historical zoogeography and paleoenvironment, and the presence or absence of trade in exotic items.[204]

To address even such issues in a more meaningful way, however, it is necessary to define some level of temporal and spatial resolution. The lack of such control is the cause of some of the most serious problems arising from later archaeologists making reference to Teilhard and Young's study (1936) or to the follow-up study by Yang Zhongjian (= C.C. Young) and Liu Dongsheng (1949). Neither provide adequate contextual information, and in fact, we cannot even be sure that the "Anyang fauna" always equals materials derived from Shang dynasty deposits. Shih Chang-ju, one of the excavators at the time, noted in his seminal 1953 article that animal bones during the pre-war seasons (that is, those submitted by the excavators for study), all had record numbers linked to spatial and stratigraphic coordinates,[205] but Teilhard's and the other accounts failed to include this "level of detail" and so, they actually also include pre-Shang Neolithic materials. Shih, in a brief evaluation of the problem, said "animals like whale, tiger, leopard, elephant, deer, cattle, pig and dog were commonly found in Shang layers; black rat and bamboo rat were mostly found in Longshan layers; in Yangshao (i.e. pre-Longshan) layers there were also dog, sheep and cattle bones."[206] The elementary failure to record the specific cultural context of the remains under study means that the arguments made regarding the "Anyang fauna" as described by Teilhard, Yang (Young) & Liu for our understanding of Shang culture have often been flawed.[207] Not only does this imperil serious analysis of spatial, temporal or social variation,[208] it also affects the study of climate and trade. An animal believed to indicate a warmer climate (or the existence of an exchange route for exotic objects) during the Shang period (like bamboo rat, or rhino) does not prove this if the remains actually date to a period long before the Shang! The implication is that the important pre-war Anyang animal remains need to be re-studied with attention to stratigraphy and spatial distribution. The various arguments previously made about climate and the role of different animals in Shang culture must be re-evaluated.[209] Shih's important article was a first step;

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[204] R. Lee Lyman, "On the analysis and interpretation of species list data in zooarchaeology," *Journal of Ethnobiology* 6.1 (1986), 67–81.

[205] It is unclear whether this refers to all bones examined by Teilhard and Young, or if those also included some bones from early seasons that had not been recorded properly.

[206] Shih Chang-ju, "Henan Anyang...dongwu guhai," 3–5.

[207] Shih Chang-ju's apologies for pointing this out (Shih, op. cit., 5) seem quite unnecessary.

[208] For examples of how zooarchaeology can be linked to the study of social status, ethnicity and other topics, see Pam J. Crabtree, "Zooarchaeology and complex societies: Some uses of faunal analysis for the study of trade, social status and ethnicity," in M.B. Schiffer, ed. *Archaeological Method and Theory*. Vol. 2. (Tucson: University of Arizona Press, 1990); N.L. Hamblin, *Animal Use by the Cozumel Maya* (Tucson: University of Arizona Press, 1984); M.A. Zeder, *Feeding Cities: Specialized Animal Economy in the Near East* (Washington, D.C.: Smithsonian Institution Press, 1991), and P. Rowley-Conwy et al., *Animal Bones, Human Societies* (Oxford: Oxbow Books, 2000). In particular, Zeder's study of ancient Near Eastern faunal remains builds precisely on data recovered on of social differentiation in animal use within an ancient city.

[209] This applies not only to various archaeological and historical arguments but also to discussions of climate history. Like Ji Hongxiang, "Cong dongwu huashi kan gu qihou," *Huashi* 1974.2, 13, who uncritically accepts Teilhard & Young's conclusions (compare also K.C. Chang, *The Archaeology of Ancient China*, 79). Climate history research will undoubtedly develop as part of new research approaches to the area (Institute of Archaeology and the University of Minnesota Archaeology Laboratory, "Anyang Huanhe liuyu quyu kaogu yanjiu chubu baogao"), and combined with refined zoogeography data. Also see D.N. Keightley, "The environment of ancient China," in M. Loewe et al., eds., *The Cambridge History of Ancient China*, 30–36.

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a re-analysis will depend on the availability of the excavated materials, and field-notes.[210]

The continued lack of systematic use of the precious information hidden, as it were, in the animal remains is also related to the long-standing scarcity of archaeologists trained in the theory and methods of zooarchaeology, the study of human skeletal remains, or general osteology and paleopathology, during both pre- and post-war excavations at Anyang, a fact which may explain many of the shortcomings of the formal published archaeological reports as regards identification of excavated faunal remains.[211] This is probably what could be expected in an era when the analysis of animal bones from archaeological sites worldwide often at best consisted of sending a sample of hopefully identifiable specimens to zoologists who did not visit the sites, or even have a chance to influence the research design or excavation methods. Excavators were often unaware even of simple methodological issues and did not give priority to biological remains.

In the post-war period, excavation practices either did not change, or standards even deteriorated: animal bones are still often incompletely recorded, often not collected or stored, but instead reburied before study—retained only in a few exceptional cases when entire, articulated and well-preserved skeletons are encountered in contexts such as sacrificial pits. The same is true for human skeletal material: very little material has been retained, even from burials, except well-preserved crania used largely only for osteometric biodistance studies.[212] Only recently has this situation begun to change.[213]

The changes under way will also certainly affect future methodologies for quantification, a related issue of crucial importance. Teilhard and Young offered only the crudest estimates and did not even comment on the prevalence of certain body parts, etc. Neither Yang and Liu's 1949 addendum, nor the archaeological reports seriously consider just what it is that the samples represent. As a result, later estimates of abundance are just as subjective and basically unreliable as the pre-war notes of "more than one thousand," "one hundred to a thousand," etc., unrelated to spatio-temporal boundaries. This means we do not know what these figures represent, beyond a count of what was ended up on the paleontologist's table.

As Shih Chang-ju pointed out, Yang and Liu also didn't distinguish between storage or waste pits and burial offerings.[214] The formal archaeological reports do

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[210] As mentioned already, it appears very few of these animal bones remain today. Apart from some outstanding specimens, most of the less conspicuous materials were discarded during the war (Shih Chang-ju, personal communication, Taipei, June 15, 2002).

[211] This applies not only the remains from storage pits, but also to burial context (for example, the uncertain identification of pig/sheep/bovine limb bones in tomb M362, see above, 2.2.3, etc.).

[212] Personal communication, Yang Xizhang, staff archaeologist, Xiaotun, Sept. 1993.

[213] For a long time, few staff members with a training in either human or animal osteology, zooarchaeology, human paleopathology, etc. were affiliated with the Anyang Work Team of the Institute of Archaeology. After the Institute added a first specialist zooarchaeologist (Dr. Yuan Jing) to its staff in the mid-1990s, biological remains now receive more attention; this will doubtlessly influence Chinese archaeology as a whole (cf. Yuan Jing, "Shilun Zhongguo dongwu kaoguxue de xingcheng yu yanjiu," *Jianghan kaogu* 1995.2, 84–88; and, on Anyang remains, Guo Ruiji, "Yinxu de ziran huanjing yu Yin wangchao de guanxi shitan," *Huaxia kaogu* 1999.3, 87–90.

[214] Which is what his 1953 paper attempted to accomplish (without addressing the issue of quantification). Shih Chang-ju ("Henan Anyang... dongwu guhai"), Li Ji's *Anyang* and other first-hand summaries of the excavations actually offer little more than personal impressions.

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contain figures for the animals found in sacrificial pits and usually also for burials, but basic methodological problems are evident and the count is confounded by bad preservation.[215] In the case of well-defined features this may seem to concern only details, like the difference between, say, 40 and 44 dogs in a pit. This kind of quantifications becomes an issue, however, when inquiring about patterns of symbolic meanings in the Shang sacrificial pits. The problem is even more readily apparent in the lack of any sound appreciation of the astonishing grand total of animal remains that came from "ash" or storage pits, an estimated 90%[216] of the pre-war recovered materials.

The following review of identified species and rough estimates of quantification is based on published information. I add question-marks where appropriate, and seek to contribute suggestions towards the development of archaeological research for the future. The review is also the foundation for comparison with the information contained in the oracle bone inscriptions (3.2.3, below). An overview is listed in Table 1, p. 168–69 below. The general implications of the distribution and patterning in the "Anyang fauna" will be discussed in the conclusions.

2.3.2 Identification and quantification

The species seen in the "Anyang fauna" were listed in three groups by Teilhard and Young (1936) and in the additional study by Yang and Liu (1949) on the same selection of materials.[217] I continue using this tripartite division here, including the basis of the original identification of each represented animal, changes and additions from later reports (based on Shih Chang-ju[218] and other authorities), and any recent scientific name changes.[219]

As for quantities, the two influential enumerations of the Anyang fauna used

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[215] Or by less-than-perfectly symmetrically organized offerings. In the case of the large animal pit M357, with over 40 individuals each of dogs and sheep, the numbers were approximated (i.e. by Shih) through dividing a number of unidentified bones (sic). A more reliable estimate of the MNI (minimum number of individuals) would require all fragments to be collected, identified and sided as far as possible, then deriving a count from selecting and counting only the identifiable parts (see R.G. Klein et al., *The Analysis of Animal Bones from Archaeological Sites*).

[216] Shih Chang-ju, "Henan Anyang... dongwu guhai," 3.

[217] It had not been possible to ship all materials to Peking, since the remains were "very many," especially limb bones. Even this time, "there was not time to examine all" (Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," 1949). Yang and Liu (himself a paleontologist), still did not discuss such issues as the sample, provenience , etc..

[218] Shih Chang-ju, "Henan Anyang... dongwu guhai." For another brief summary of animal remains, see Institute of Archaeology, *Yinxu de faxian he yanjiu* (Peking: Kexue, 1994), 415–18.

[219] S.J. Olsen pointed out that "many of the taxonomic designations... assigned to the Anyang excavated mammals in the 1930s have been changed, due to more recent discoveries and comparisons. Many of the Anyang fossils [sic] were described at a time when it was the common practice to erect a new taxon, based only on fragmentary materials, without having adequate and valid specimens for comparison" ("The Asian Elephant... and Chinese culture," 32). Only occasionally has it been possible to add recent taxonomic re-designations. For these, I rely on zoological treatises on Asian fauna such as Boonsong Lekagul and J.A. McNeely, *Mammals of Thailand* (Bangkok: Darnsutha Press, 1988); G.B. Corbet and J.E. Hill, *The Mammals of the Indomalayan Region: A Systematic Review* (Oxford: Oxford University Press, 1992); and Don E. Wilson and D.M. Reeder, *Mammal Species of the World: A Taxonomic and Geographic Reference* (Washington: Smithsonian Institution Press, 1993).

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estimates in which each species was placed in one of four categories: under 10, 10–100, 100–1000, and over 1000. Only three species were listed as being represented by more than 1000 individuals in the collection: the long-standing domesticate short-snouted pig (*zhongmian zhu*, see below), the (semi-domesticate) elaphure, and the buffalo.[220] The information provided in their tabulated data on represented skeletal *parts* sometimes suggest interesting trends (the ubiquitous buffalo was represented by jaw bones, not horns, which thus conceivably had been used somewhere else; etc.). But because of the paucity of contextual information, no in-depth analysis of the distribution of specific skeletal *parts* can be attempted. However, as mentioned, interesting patterns emerge in the general distribution of species.

The list includes a total of 29 animals including the 5 species added by Yang and Liu, plus fishes, birds, turtles, etc. They are as follows:

> I. "Wild indigenous animals (native, or local):" Tiger and leopard; river-deer and Sika deer; badger, racoon-dog, hare, bamboo-rat, and black rats included by Teilhard and Young; Yang and Liu added the fox and the field rat, as well as the rhinoceros, which I have moved to "Imported exotics." The buffalo is included here, along with the two species of bear, originally listed as "imported exotics," and the Anyang elaphure deer, which may well have been a semi-domesticate.
>
> II. "Domesticated local animals:" Dog; cattle; a buffalo, possibly a semi-domesticate, is moved to the wild animals, above; sheep and goat; two kinds of pigs, one possibly a wild species; the horse, and the monkey. Yang and Liu added the common cat. The horse is likely also an exotic import, but is used as a domesticated animal, and included here.
>
> III. "Imported exotic species:" Elephant, tapir, and whale; Yang and Liu added the takin; the rhinoceros also belongs here.

I. Wild indigenous animals

* Tiger (*Panthera* [formerly *Felis*] *tigris*; *hu* 虎): Represented in the first sample by one tiger skull, and some cranial fragments. Identical to modern Chinese tigers. More skulls and bones were reportedly excavated, and were noted but not described, in the second study (most regrettable).[221] Shih Chang-ju mentioned in passing that unspecified tiger and leopard bones were found, for example, "in the pit HIII."[222]
* Leopard, or panther (*Panthera pardus*; *bao* 豹): Identified from a small number

[220] A table is found in Yang and Liu, op. cit., 146–47.

[221] Teilhard and Young, op. cit., 9–11; Yang Zhongjian et al. ("Anyang Yinxu zhi furu dongwu qun buyi," 146), mentioned over 20 skulls, and some limb bones.—Apart from one possibly recently extinct population in the southeast, China's tigers are now found only in the far southwest and northeast. Historically they were known from all of East Asia. On their fluctuating distribution, see Robert B. Marks, *Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China* (Cambridge University Press, 1997), 42 ff.; also A. de C. Sowerby, "Horns of a new deer and other relics from the waste of Yin, Honan, China," *China Journal* 19.3 (1933): 141–44.

[222] Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 5.

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of cranial fragments. Shang remains may be exotic imports from the south;[223] in later history it is only known from southern China.

* River-deer (also called water-deer; *Hydropotes inermis*; e.g. *zhang* 獐): Identified from large amounts of cranial elements, including mandibles, crushed skulls, etc.; a small water-deer still living in the Yangtze river valley. Its present range extends south to Guangxi, north to Korea.[224]
* Sika deer (*Pseudaxis hortolorum*, now *Cervus nippon*;[225] in Chinese *lu* 鹿 or *mei-hualu* 梅花鹿): "Particularly common," identified from antlers, cranial elements, limb bones, including a small number of metacarpals. Identical to the modern Sika deer. Antlers and bones were frequently sawn, i.e. derived from bone tool workshops (as refuse, etc.). One sample skull with an inscription on the frontal part was likely the deer skull discovered together with the water buffalo skull, mentioned below (under Bovines).[226]
* "Anyang Deer" (Elaphure; *Elaphurus menziesianus*; Chinese *mi* or *milu* 麋鹿; or *sibuxiang lu* 四不像鹿; now included in *E. davidianus*, Father David's or simply David's Deer; they were obviously very closely related, if not identical).[227] "Probably the most common element in the Anyang fauna," identified from large amounts of antlers, which is frequently discovered in large piles of sawn pieces.[228] No skulls were used for identification, and very few mandibles or postcranial bones (apart from some metacarpals and metatarsals) were reportedly recovered. The antlers' peculiar form, different from the known David's deer (*Elaphurus davidianus*), and the separate "Anyang Deer" is the sole basis for the taxonomical identity. Teilhard and Young saw the characteristic antler form as the result of inbreeding in a closed, domesticate or semi-domesticated group. However, not a single antler came from animals where the antler base was preserved and the antler had been shed naturally—all of these animals must have been killed to obtain their antlers. Presumably, they were wild animals captured and killed for this purpose. The many instances of hunting of what are apparently elaphure deer in the oracle bone inscriptions also suggest this (see 3.2.3).

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223 Teilhard and Young, op. cit., 12; Lekagul and McNeely, *Mammals of Thailand*, 628.

224 Teilhard and Young, op. cit., 25–27; Wilson and Reeder, op. cit., 388.

225 Teilhard and Young, op. cit., 27–30; Wilson and Reeder, op. cit., 385–86. Relatively few antlers and bones were adult, and the size "generally" small. Teilhard and Young made no attempt of determining the reason for this, only speculating that the specimen may be juvenile (sic), or that the size may be the result of changes due to domestication.

226 Shang-era deer may also have included red deer (*Cervus elaphus*), possibly also the small Muntjak deer (*huangji* 黃麂), but none of these have been confirmed archaeologically.

227 Wilson and Reeder, *Mammal Species of the World*, 387–88; Teilhard and Young, op. cit., 30–38. Teilhard and Young didn't have access to dentition or other materials from David's deer for comparative purposes. On David's deer, which only recently became extinct in the wild but still exists in some confines, see L.C. Hopkins, "Records of David's deer as hunted by Shang-Yin sovereigns," *Journal of the Royal Asiatic Society of Great Britain and Ireland* (1939), 422–28; E.H. Schafer, "Cultural history of the Elaphure," *Sinologica* 4 (1956), 250–72; and Benjamin B. Beck and Christen Wemmer, ed. *The Biology and Management of an Extinct Species: Père David's Deer* (Park Ridge, N.J., USA: Noyes Publications, 1983). In the latter work Wemmer (p. 15) says the classification of the David's deer is still unclear, decades after the British mammalogist Pocock wrote that "there is no stag whose systematic position has troubled zoologists so much as Elaphurus." Wemmer does not refer to Teilhard and Young, nor to *E. menziesianus*. Like Wilson and Reeder in *Mammal Species of the World*, he supports an independent single-species *Elaphurus* genus. On this animal see too Sowerby, "Horns of a new deer..." (1933).

228 Teilhard and Young, op. cit., 30, quoting Dong Zuobin's observation.

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* Buffalo: (genus *Bubalus*): Listed as *Bubalus mephistopheles* Hopwood, a new species, identified as over 1,000 individuals in the original sample, both from almost complete specimens and from large numbers of horn cores (characteristically "triangular" and pointing backwards in a parallel plane to the maxillary tooth row). Two of the described skulls had been worked, if only incompletely sawn. The identification of a separate extinct species of Anyang buffalo is still recognized as taxonomically valid.[229] The buffalo's listing as a domesticate is tentative; most buffalo may still have been wild. There may also have been wild cattle, perhaps several species.[230]
* Badger (genus *Meles*, today with only one species, *M. meles*; Shih Chang-ju listed it in his 1953 review as *M. leucurus*); Identified from a small number of mandibles only. Identical to modern Chinese badgers (*huan* 獾). It represents a Palearctic fauna (i.e., not southern, Indo-Malayan).[231]
* Racoon-dog (or "raccoon;" *Canis procyonides*; now *Nyctereutes*, *li* 貍, or *hao* 貉) : Identified from just 3 mandibles. This wild dog species is still common all over East Asia, but extends no further south than northern mainland SE Asia). (The domesticated dog was much more commonly represented; see below).[232]
* Fox (*Vulpes vulgaris*, now *Vulpes vulpes*, *hu* 狐): Identified from several skulls only, and estimated as "not very common" at Anyang.[233] (No wolves have been identified).

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[229] Teilhard and Young, op. cit., 45–52, 56; Wilson and Reeder, *Mammal Species of the World*, 402; see too Keightley, *Sources of Shang History*, 7 n. 17, 18, 20, for a discussion of the difficulties in identification. Peter Grubb (letter of Aug. 5, 1994) confirms that buffalo taxonomy is problematic, but assuming that *B. mephistopheles* was correctly identified (that is, based on fossil materials), and that it was a domesticate, the name is still valid. No comparison of the Anyang bovines have been made with modern Southeast Asian species such as the gaur, whose range may have extended farther north in antiquity. For the natural and cultural history of the *Bos gaurus*, a species of large wild cattle still present in the far Southwest of China and Southeast Asia hunted and also used for breeding purposes in many areas until very recently, see F.J. and E.S. Simoons, *A Ceremonial Ox of India: The Mithan in Nature, Culture, and History—With Notes on the Domestication of Common Cattle* (Madison: University of Wisconsin Press, 1968). Other possibilities are kouprey and banteng (cf. Boonsong Lekagul and McNeely, *Mammals of Thailand*, 262–66). None of these wild species have been identified from China, as far as I know, but they have perhaps been overlooked. The kouprey was new to science as late as in the 1930s; as late as in the mid-1990s a new species of deer was discovered in Vietnam.

[230] Teilhard and Young's account did not include the famous 1929 find of a large mammal skull with an inscription mentioning the capture of a horned animal, later confirmed as a bovine, a wild hunted buffalo. The skull itself is shown in Dong Zuobin, "Huo bai 'lin' jie" (326, pl. 1, 2). The paleontologist Pei Wenzhong, in a rebuttal of Dong, wrote that "the French paleontologist [Teilhard de Chardin] identified the teeth... as bovine;... according to the paleontologist Yang Zhongjian, this... is really a bovine skull" (*niu tou* 牛頭; cf. "Ba Dong Zuobin 'Huo bai 'lin' jie' *Shijie ribao*, 1934], quoted in Lei Huanzhang (J.A. Lefeuvre), "Zai shuo 'Niu fang ding,'" 1990, 6–7). Lefeuvre asked the paleontologist Sauveur d'Assignies to examine it at the Academia Sinica in Taipei; he concluded it was a buffalo, not a rhino. See also Jean A. Lefeuvre, "Some remarks on the graph X and the character *si*," *Early China* Suppl. 1, 1986; and his exhaustive article, "Rhinoceros and wild buffaloes north of the Yellow River at the end of the Shang dynasty: some remarks on the graph and the character," *Monumenta Serica* 39 (1990–91), 131–57. K.C. Chang (*The Archaeology of Ancient China*, 279, etc.) suggests the buffalo was domesticated in late neolithic times. See 2.2.1, and 3.2.3 for the oracle bone evidence.

[231] Teilhard and Young, op. cit., 9; Corbet and Hill, *Mammals of the Indomalayan Region*, 4.

[232] Teilhard and Young, op. cit., 7.

[233] Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," 148; Wilson and Reeder, op. cit., 287.

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* Hare (*Lepus* sp.; *tu* 兔): Represented in great numbers, by both cranial and post-cranial elements; most likely identical with the present common hare of the area.[234]
* Bamboo rat (*Rhizomys* sp.; Shih Chang-ju listed it in his 1953 review as *Rh. troglodyter*; Chinese *zhushu* 竹鼠): Identified from several mandibles, indicating a size smaller than the contemporary bamboo rats that Teilhard and Young knew existed in southern China. The find was a surprise, seen as a strong indication that the Anyang area climate was much warmer during the Shang than now.[235] However, the remains "mostly" came from Longshan strata, not Shang.[236] The identification itself may also be problematic.[237]
* Black rat (*Epymus rattus*, now *Rattus rattus*): Identified from two skulls. Identical with the present species.[238]
* Field rat (*Siphneus spilurus*, now *Myospalax psilurus*; *tianshu* 田鼠): Identified from just a few elements. Interestingly, it is not known from South China but extends north into Mongolia and Eastern Siberia.[239] These animals could have been consumed as meat, just as rural people dig for, catch and eat field rats in Southeast Asia today as a poor man's protein food (thus, as with other species, the internal distribution within the Anyang sites holds considerable interest).
* Bear (*Ursus* sp., some *U. japonicus*; *xiong* 熊): First described from only 1 maxilla and 2 left mandibles (species identification uncertain), plus 1 large mandible probably from yet another species. Listed as "less than 100 specimens" in Yang and Liu's report. The former bear may have been a small variety of indigenous Chinese black bear, perhaps a captive, imported southern form. And since morphological comparison were made with measurements from modern northern specimens, it would not be surprising if they were larger than Anyang-era native bears.[240] Thus these bears were probably "wild, indigenous." The relatively limited record also may simply reflect that the investigated deposits didn't represent the locales where bears were deposited.

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234 Teilhard and Young, op. cit., 15–16.

235 Teilhard and Young, op. cit., 13–15. This is possible, according to "Bergmann's rule": all other things being equal, an animal species will be larger in colder climates (R.G. Klein et al., *The Analysis of Animal Bones from Archaeological Sites*, 94).

236 Shih Chang-ju, "Henan Anyang... dongwu guhai," 3.

237 For example, other species, including two of species known also from Malaysia, are known today from Southern China (Bonsoong Lekagul and McNeely, *Mammals of Thailand*, 388). In addition, there are still *Rh. sinensis* in the Yangtse river valley and as far north as in southern Shaanxi and Gansu. See Shaanxi province zoological research inst., *Shaanxi zhengui jingji shoulei tuzhi* (Xi'an: Shaanxi kexue jishu, 1981), 20; Corbet and Hill, *Mammals of the Indomalayan Region*, 405. In a comment on Teilhard and Young's research, the pioneer archaeologist Johan Gunnar Andersson remarked that many *Rh. sinensis* were found at Neolithic Yangshao sites in northern China. See J.G. Andersson, "Researches into the prehistory of the Chinese," *Bulletin of the Museum of Far Eastern Antiquities* 15 (1943), 35–40. The animal clearly has potential as a climate indicator, but only if a broad study is made of its changing distribution and size variation using controlled comparison of well-provenienced remains.

238 Teilhard and Young, op. cit., 12; Wilson and Reeder, op. cit., 649; 658.

239 Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," 148–49; Wilson and Reeder, op. cit., 675–76.

240 Teilhard and Young, op. cit., 7–9; on animal size see above on the bamboo rat and "Bergmann's rule."

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II. Domesticated indigenous animals

* Cat (*Felis* sp.): Represented by a single long bone. There were probably more cat bones in the Anyang collections; very little can be said of Shang cat-keeping on the basis of just one specimen![241]
* Dog (*Canis familiaris*; *gou* 狗): Identified (as "a banal type" [sic] of domesticated dog) from cranial elements and mandibles, apparently identical to present-day Chinese domesticated dogs.[242]
* Cattle: the genus *Bos* (cattle, oxen; *niu* or *huangniu* 黃牛), represented by a "*Bos exiguus*" originally identified on the basis of just a few cranial fragments with horn core bases and some metacarpals and metatarsals.[243] Given the small size (and the large numbers seen in the Shang strata), it is highly probable that it was a domesticate, even if the designation may still be said to have been insufficiently proven since the materials were inadequately examined. (This charge applies more seriously to the problematic designation of the buffalo, below, as a domesticate[244]).
* Sheep ("Shang sheep" or "Anyang sheep") (*Ovis shangi*, *Yinyang* 殷羊): a small, "apparently domesticated" sheep, "commonly found." A new species defined by Teilhard and Young, on the basis of horn forms. Also represented by cranial fragments, some metacarpals, and metatarsals. The sheep is reported as "common" as opposed to the goat, even if both are represented in the selection by only a few fragments.[245] In any case, the frequent offerings in tombs and pits are only identified in site reports as *yang* (a term which does not distinguish sheep/goat— which is also not easy to do in skeletal remains).
* Goat (genus *Capra*, *shanyang* 山羊): Identified from a single skull, believed to have come from a domesticated stock of goat.[246]
* Pig (genus *Sus*; *zhu* 豬): Represented in large numbers. Probably a domesticated pig, with the new name of *Sus vittatus* var. *frontalis* given to it by Teilhard and

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241 Yang Zhongjian and Liu Dongsheng, "Anyang Yinxu zhi furu dongwu qun buyi," 148.

242 The widespread use of dogs as burial offerings at Anyang is never mentioned (Teilhard and Young, op. cit., 6–7). For a recent discussion of the dog, its morphology, and its domestication in prehistoric China, see J.W. Olsen, "Prehistoric dogs in mainland East Asia," in S.J. Olsen, ed. *Origins of the Domestic Dog* (Tucson: University of Arizona Press, 1985), 47–61, etc. (note the brief mention on p. 60–61 of Shang dogs as burial offerings).

243 Teilhard and Young, op. cit., 44–45. It had earlier been described and named *Bison exiguus*, a new species from Anyang, by H. Matsumoto ("On some fossil mammals from Honan, China"). The taxonomic identification probably should be re-evaluated, as both the earlier new species and this identification were based on very few fragments. Wilson and Reeder, *Mammal Species of the World* (400–402) lacks reference to *B. exiguus*. One co-author, Dr. Peter Grubb, told the present author (letter of Aug. 5, 1994) that as a probable domesticate, according to taxonomic practice (with preference for an informal nomenclature for domesticated breeds or morphotypes) it may be subsumed under the senior synonym *Bos taurus* (i.e. the descendant of the West Asian and European auroch, *Bos primigenius*, the ancestor of European and Indian common cattle. It may also be a descendant of local wild bovine forms (see below).

244 On the fallacy of osteological identification of domesticates from small samples (which could be deceptive because of considerable variation within species), see too S.J. Olsen, "Archaeologically, what constitutes a domesticated animal?" in *Advances in Archaeological Method and Theory*, ed. M.B. Schiffer, vol. 2 (Tucson: University of Arizona Press, 1979), 181–83. Teilhard and Young do not spell out their criteria for a domesticate status.

245 Teilhard and Young, op. cit., 38–42. Did the field excavators communicate such an impression to the authors, on what was it based? This remains a mystery.—The species is apparently no longer recognized (Wilson and Reeder, *Mammal Species of the World*, 408–409, lacks any reference to *Ovis shangi*).

246 Teilhard and Young, op. cit., 43–44.

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Young on the basis of morphological traits and the relatively large number of juveniles in the collection).[247] There is also a single specimen of a different species, either a different domesticated pig, or a wild boar.[248] The skulls depicted are from long-snouted animals, which possibly could be wild, since these depend to a larger degree on their own foraging for food than domestic pigs, which have been demonstrated to develop shorter snouts and crania).[249] In that case the majority of the pigs may have belonged to a wild form, and a smaller amount to the domesticated form (both named *Sus scrofa*). Depending on the length of the domestication process and the amount of breeding with wild animals, the morphology could have varied substantially.

* Horse (*Equus caballus*; *ma* 馬). Identified from four teeth only.[250] The Shang-era Anyang horse probably is a small, domesticated form, possibly derived from the Central Asian Przewalski horse. (Again, as with the dog, the authors did not mention horse offerings in sacrificial chariot pits, etc.).
* Monkey (Macaque; *hou* 猴): Identified only from maxillary and mandibular fragments corresponding to the *Macacus tchihliensis*, still present in north China.[251] Later, monkey remains were again found both in independent sacrificial pits at Xibeigang, including in the tomb WKGM1, but no precise identifications have been made.

III. Imported exotic species

* Elephant (Asian elephant, *Elephas indicus*, now *E. maximus*; *xiang* 象): "Not uncommon" (sic!) at Anyang, wrote Teilhard and Young who only described one incomplete lower molar(!), but also mentioned "fragmentary young skulls and limb-bones," and regarded the elephant (as well as the tapir, below) as "a southern type brought in as a tribute" which must have been brought in alive, the authors argued, because not only the ivory but "perfectly useless bones" were present. Teilhard and Young overlooked the discovery of two complete elephant skeletons in 1935, and another in 1978, in sacrificial pits at Xibeigang (above, 2.2.3). A long-standing debate has followed on the identity of the Shang elephants and if they were native to the area.[252]

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247 Teilhard and Young, op. cit., 19–20; the *vittatus* is now replaced by *S. scrofa* (Wilson and Reeder *Mammal Species of the World*, 379).

248 No wild boar is otherwise noted. Yang Zhongjian et al. (p. 147) give an estimated abundance at "1000+" for a *zhongmian zhu* 肿面猪, a "swollen-face pig," and "100+" for "pig." K.C. Chang (*Shang Civilization*, 138) translates these as *Sus vittatus* and *Sus scrofa* respectively, which is incorrect.

249 See *inter alia* Nishimoto Toyohiro, "Yayoi jidai no buta ni tsuite," *Kokuritsu rekishi hakubutsukan kenkyû hôkô* 36 (1991), 175–94.

250 Thus called *zhongmian zhu*. Teilhard and Young, op. cit., 19. Yang Zhongjian et al. later also examined skulls and other bones ("Anyang Yinxu zhi furu dongwu qun buyi," 147).

251 Teilhard and Young, op. cit., 53–54.

252 Teilhard and Young, op. cit., 52–53. Some scholars of ancient China discuss oracle inscriptions or make reference to much later literary sources without connection to the actual archaeological evidence from Anyang. See, for example, Xu Zhongshu's "Yin ren fu xiang ji xiang zhi nan qian," *Bulletin of the Institute of History and Philology* 2.1 (1930), 60–75, written before the archaeological evidence had become widely known; also Edward H.

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* Rhinoceros (*Rhinoceros* sp.,[253] *xiniu* 犀牛): Identified only from a third left tarsal and a probable second carpal bone. No precise provenience available, even so the specimen was regarded as Shang period "Anyang fauna," introduced into it as an exotic species. Actually, it may have come from pre-Shang (Longshan strata).[254]
* Tapir (*Tapirus indicus*; *mo* 貘): Identified from two mandibular fragments from different individuals, one adult and one juvenile, with deciduous teeth: a surprise, since no Holocene tapirs had been found so far north, and, just as elephants and bamboo rats, they were quickly interpreted as the remains of an occasional tribute brought from the south.[255] However, the tapir bones may well have come from pre-Shang deposits. To my knowledge, there have been no finds of remains of this tropical species dated to the Shang or later periods.
* Whale (*Cetacea* sp.; *jing* 鯨): Identified from vertebrae and limb-bones, found in "large numbers" (sic!) according to Teilhard and Young, who saw it as a firm indication of the "artificial" (= cultural) character of the faunal remains as a whole (because of the large distance from the sea).[256] As for quantity, even if the analyzed remains included the bones from Xibeigang royal graves, the archaeological reports indicate no more than several tens of bones in all, some identified as deriving from a single animal (2.2).
* Takin (Lichi-takin; *Budorcas taxicola lichii*; *niujiaoling* 扭角羚): a new subspecies of the takin, an antelope now named *Spiroceros* and today present in the moun-

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Schafer, "War elephants in ancient and medieval China," *Oriens* 10 (1957), 289–91; etc. For more zoogeographical and cultural perspectives see H.T. Chang, "On the question of the existence of Elephants and Rhinoceros in N. China in historical times," *Bull. Geol. Soc. China* 5 (1925), 2, 97–106; Bernhard Karlgren, "Elephant and rhinoceros in ancient north China," in Bengt Lyberg et al., ed. *Festskrift tillägnad Carl Kempe 80 år: 1884–1964* (Stockholm: Almqvist & Wiksell, 1964, 633–39); Liu Dunyuan,"Zhongguo lishi shiqi xi; xiang de fenbu ji qi bianqian," in Zhang Zhongge et al., ed. *Zhongguo xumu shiliao ji* (Peking: Kexue, 1986); S.J. Olsen, "The Asian Elephant, *Elephas maximus*, and Chinese culture," *The Explorer's Journal* 72.1 (1994), 30–35; Wang Yuxin and Yang Baocheng, "Yinxu xiangkeng he 'Yin ren fu xiang' de zai tantao," in Hu Houxuan et al., *Jiagu tanshi lu* (Peking and Hongkong: Sanlian, 1982); also M. Fiskesjö, "On the extinction of the elephant and the rhinoceros in ancient China" (paper read at the 35th Tôhô Gakkai International Conference of Orientalists, Tokyo, 1990). On the changes in distribution, including in late imperial times, see R.B. Marks, *Tigers, Rice, Silk, and Silt*, 44 ff.; see too Wen Huanran et al., "Lishi shiqi Zhongguo yexiang de chubu yanjiu," *Sixiang zhanxian* 1979.6, 43–57.

253 Three different rhinoceros species live or have recently lived in Asia and may all be possible candidates:
1) Sumatran (or asiatic two-horned, or hairy rhinoceros) (*Dicerorhinus sumatrensis*; in Chinese: "Sumen xiniu"), historically existed in much of SE Asia (and "probably" in South China [Wilson and Reeder, *Mammal Species of the World*, 372]);
2) Great Indian rhinoceros *(Rhinoceros unicornis*; "Yindu xiniu"), which may have occurred in SE Asia until the medieval period; and
3) Javan or lesser one-horned rhinoceros (*Rhinoceros sondaicus*; "Zhuowa xiniu"), found in much of SW China and SE Asia before the middle of the 19th century (see Burton and Pearson, *Collin's Guide to Rare Mammals of the World*, 164–65, Boonsong Lekagul and McNeely, *Mammals of Thailand*, 653–56, Wilson and Reeder, *Mammal Species of the World*, 371–72, G.B. Corbet et al., *The Mammals of the Indomalayan Region*, 241–43).

254 Curiously, only in this single case do the authors Yang and Liu underline that no original context was recorded ("Anyang Yinxu zhi furu dongwu qun buyi," 149–50). Again, this accords with Shih Chang-ju's account ("Henan Anyang... dongwu guhai," 1953; reiterated in a June 15, 2002 conversation) that all the bones' context originally was recorded (but never published). The conspicuous absence of rhinoceros remains is also a powerful case against the flawed argument that the oracle bone graph interpreted as *si* (兕) might mean rhinoceros, instead of the wild buffalo or cattle frequently seen in the archaeological remains (also see below, 3.2.3).

255 Teilhard and Young, op. cit., 16–18; 53, 58.

256 Teilhard and Young, op. cit., 12. On the whale remains, see too above, 2.2.

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tain ranges of Shaanxi, and possibly Shanxi.[257] The subspecies, now extinct, was represented by one pair of horns excavated from the royal tomb M1500, stained green from the association with bronze grave goods.[258] It is possible that it was not local but imported as exotic goods (like the whale bones and other animal remains introduced as offerings in the royal tombs).[259]

As for animals other than mammals, and other animals not reported above, we know less. Many smaller fish, birds, reptiles and other animals have escaped detection due to sample bias, or because they have been less obvious and not a focus of interest. As for humans, left off the paleontologists' and archaeologists' lists, they are set aside for the moment, but the following must be mentioned:

* Birds: unidentified bird bones have been mentioned in several circumstances, and both domestic chicken and wild birds have been confirmed. In the pre-war excavations, one small pit with only bird bones was found (M210, see 2.2.3); also, Shih Chang-ju said eggshell and bones believed to be from domestic chicken were common in Shang pits at Xiaotun; as for burials, he quoted observations made by local grave-robbers, that there was a pattern of "dogs underneath, chicken on top" in Shang graves, but this was formally recorded only once.[260] In post-war excavations chicken bones have often been found inside ceramic vessels.[261] Li Ji had some Anyang bird specimens identified in 1960 (presumably all from Shang strata): a vulture, and also a peacock and a pheasant which now inhabits southern regions only.[262] In 1987, a concentration of bird remains was found in the same Shang ash pit as the one with sturgeon bone quoted above, in the northeastern part of the Xiaotun area.[263] It included at least 4 individuals from 3 different raptors (*Aquila*, or *Buteo* sp., represented by 4 crania and 20 or more talons, but no tarsals or metatarsals), plus single or very few bones from other birds (common house hen, pheasant, and owl; 2 lower beaks from kingfishers; a single radius from a red-crowned crane) The exact provenience was not recorded, from this particular pit. The exotic content indicates that this was no ordinary trash pit—perhaps an exotic pet cemetery.
* Fishes: Five species of fishes still native to the area and one coastal species not found inland were recovered from the pre-war excavations.[264] Also, a sturgeon bone, possibly a long-distance import from the Yangtze river (over 600 km to the south), is reported from a recent excavation at Xiaotun.[265]

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257 Shaanxi province zoological research institute, ed. *Shaanxi zhengui jingji shoulei tuzhi*, 54, Wilson and Reeder, op. cit., 404.

258 Young, C.C., "Budorcao, a new element in the proto-historic Anyang fauna of China," *American Journal of Science* 246 (March 1948), 157–64; Yang Zhongjian, "Anyang Yinxu niujiaoling zhi faxian ji qi yiyi," *Zhongguo kaogu xuebao* 1948.3, 261–65.

259 Young, "Budorcao...," 162) rejects this as too "hard to believe" and described it as an extinct, local form. Climate change may be one explanatory factor. More comparative materials is required to address this issue.

260 In M232, a middle-status grave. See 2.2.2 above, and Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 12.

261 Institute of Archaeology, *Yinxu de faxian he yanjiu*, 417.

262 K.C. Chang, *Shang Civilization*, 140.

263 Hou Lianhai, "Ji Anyang Yin xu zaoqi de niaolei," *Kaogu* 1989.10, 942 ff.

264 They are listed in Wu Xianwen, "Ji Yinxu chutu zhi yugu," *Zhongguo kaogu xuebao* 1949.4, 139–43; see also K.C. Chang, *Shang Civilization*, 140.

265 I.e. 87AXT1HI; Hou Lianhai, "Ji Anyang Yin xu zaoqi de niaolei," *Kaogu* 1989.10, 947.

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* Shellfish: Mentioned in various reports, these were obviously important to the Shang (as grave goods, in ornaments such as head-bands, etc.). I am unaware of any special study of the shells found at Anyang.[266]
* Turtles and tortoises: three aquatic freshwater turtles and one terrestrial tortoise that have been identified among the large numbers of turtle shells used for plastromancy at Anyang.[267] (As mentioned, they are also found both in fragments in refuse pits, and in lower-status burials, as fragmented divination materials). On the distribution of various animals, see too Table 1 (p. 168–69), and for the implications, see the concluding discussion (Part 5).

3. Oracle bone inscriptions

3.1 Introduction: The structure of oracle bone inscriptions

The enormous importance of the oracle bones and the history of their discovery has already been mentioned in the general introduction. This section will examine the evidence for hunting in the inscriptions.

The general structure of the hunting inscriptions, like most Shang hunting inscriptions, is as follows:[268]

> First, there is a *preface* listing the date of the divination, with the day designation in the 60-day Shang cycle of ten-day weeks; the diviner's name (a Shang court divination specialist[269]); and sometimes the place where the divination was undertaken (often outside the Anyang center);
>
> Second, the *charge*, which is the central part of the divination, a record of the matter being put forward for consultation,[270] such as stated plans on hunting or for making war at a certain place or time, etc.;
>
> Third, the *prognostication*, or "reading" of the result of the charge, usually

[266] Teilhard and Young, op. cit., mentioned the marine cowrie(?) *Lamprotula* shells, seemingly the most common; Shih Chang-ju mentioned an occasional, different marine shell at Xiaotun (burial M331; in *Xiaotun yizhi de faxian yu fajue*, Vol. 1, Fasc. 3, 1980).

[267] Keightley, *Sources of Shang History*, 157–60, Appendix 1, "Identification of the inscribed turtle shells of Anyang" by J.F. Berry.—An early identification of another, new species [*Testudo anyangensis*] remains in doubt. Another new turtle has been described from the Dawenkou Neolithic site (Shandong sheng wenwu guanlichu, *Dawenkou xin shiqi shidai muzang fajue baogao* [Peking: Wenwu, 1974], Appendix 2, 159–64: "The first find in China of Dipinggui [*Terrapene culturalia*], a new species"). Recently, the turtles seen earlier have been reconfirmed, as external tributary or exchange items. See Ye Xiangkui and Liu Yiman,"Henan Anyang Yinxu Huayuanzhuang dongdi chutu de guijia yanjiu," *Kaogu* 2001.8, 85–92.

[268] See too Keightley, *Sources of Shang History*, 28–44; "Shang oracle-bone inscriptions," in E.L. Shaughnessy, ed. *New Sources of Early Chinese History: An Introduction to the Reading of Inscriptions and Manuscripts* (Berkeley: Institute of East Asian Studies, 1997); Song Zhenhao, "Yinxu jiagu zhanbu chengshi de zhuisuo," *Wenwu* 2000.4, 35–45; Wang Yuxin et al., *Jiaguxue yibai nian*, ch. 6–7. Many inscriptions lack several of these components.

[269] The names of over 120 such diviners are known (Keightley, *Sources of Shang History*, 31; also see "The late Shang state: When, where, and what?," 549.

[270] It should not be understood as being put forward in the form of a question, but rather a statement to be rejected or approved by the oracle or the spirits behind it (Keightley, *Sources of Shang History*, 29 n.7, 33; see too Qiu Xigui, "An examination of whether the charges in Shang oracle bone inscriptions are questions," *Early China* 14 (1989), 77–114; etc.).

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made by the diviner-king, who determined if the crack could be "used" and whether the obtained result consisted in approval, or not;

Fourth, the *verification*, i.e. a note on what actually happened after the action was carried out (for example, the actual capture of animals); this is often, but not always, signalled by the word *yun* 允 ("indeed" captured...);

Fifth, there may be a *postface* stating the month of the year, the place of divination, and (during the last period, V) the sequential number of the divining king's sacrificial cycle:

In addition, there may also be short crack notations (which say "auspicious"), and crack enumerations, carved alongside the cracks.

3.2 Hunting expeditions in the oracle bone inscriptions

The various aspects of contents related to hunting in the inscriptions can be divided up as follows: The terms central to hunting, including those reflecting major hunting methods; the terms used for various hunted prey; the actors involved; the timing and location. These aspects are reviewed in the following, citing a number of examples.[271]

3.2.1 Examples of typical hunting inscriptions

The general features of Shang oracle bone inscriptions described above can easily be recognized in the following translated examples of divination inscriptions on hunting, from various periods:

> Crack on *yiwei* [day 32]. [No diviner's name included]. "Today, [if] the king hunts [*shou*] at Guang, [he will] capture." [The king] really caught 2 female tigers, 1 wild buffalo/cattle [*si*], 21 deer, 2 boars, 127 antlerless deer, 2 tigers, 2 hares, 27 pheasants. Eleventh month.
> (*Heji* 10197, from Dong Zuobin's Period 1, approximating the reign of Wu Ding).

> Crack on *wuwu* [day 55]. Que divining: "We [will] hunt [*shou*] at Gui." The following day [we] hunted, [and] indeed captured ... one tiger, 40 deer, 164

[271] When citing oracle bone inscriptions I follow current practice among oracle-bone scholars, as far as possible citing the reference number in the recent comprehensive collection *Jiaguwen Heji* (= "*Heji*"). Only the charge itself is enclosed by quotation marks. Within cited inscriptions, dots enclosed in brackets (= "[...]") indicate a passage omitted by me, while dots without brackets (= "...") indicate a missing passage (the recovered bone or shell was damaged either pre- or post-depositionally). Words added within brackets ("[the king]") are my own additions. A Roman numeral after a citation indicates the periodization given to the inscription made by the *Heji* editors (thus "*Heji* 000, III" is an inscription assigned to Dong Zuobin's Period III—as mentioned above, those assigned to Period IV most probably should be transferred to the earliest period).—A further note on transliteration: Shang graphs are often transcribed into modern Chinese characters. Often there is indeed a clear relation (generally speaking, Shang writing and grammar do have a directly ancestral relation to later Chinese), but many Shang graphs have either not survived into the written language of later times, and thus cannot be transliterated, or they are disputed by scholars. The Latin script transliterations here are only indicative, based on conventions in modern studies, and they are not to be understood as necessarily corresponding to how these words were pronounced in Shang times.

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foxes[?], 159 antlerless deer, ... [...], a pair of [birds?], ... [...], [Crack notation:] two, three, four, five, six."
(*Heji* 10198, Period I).

[Crack on] ... *si*. Gu divining: "[If] the king traps [deer] [and?] ... nets deer, ... [then] ... " (*Heji* 10666, Period I).

Crack on ... Xuan divining: "[If] we pursue *si* [wild cattle], [we will] capture ... " ... prognosticated and said: "[We] will capture." On *yiyou* [day 22], the king pursued, [and] really captured two (*Heji* 10398, Period I).

Crack on *renshen* [day 9]. Que divining: "[At] Pu, [we will] capture elaphure deer." On *bingzi* [day 13] we trapped [using graph for elaphure deer in a pit = drove elaphure deer into pitfalls?], [and] really captured two hundred and nine. First [month]. (*Heji* 10349, Period I).

" ... [if We] hunt we [will] [meet with =] find elaphure deer. The king will shoot [them with arrows]. [There will be] no misfortune." (*Heji* 28360, Period III).

Crack on *yiyou* [day 22]. "[If] Quan 犬 [the 'Dog-Keeper'] comes to report deer, the king will go to drive ... " (*Tunnan* 997, Period IV).

Crack on *wushen* [day 45]. Divining. "The king hunts on the mountain slopes of X. Going [there] and coming [back, there will be] no misfortune." This [was] used. Capture of 1 wild cattle, 4 foxes [?]. (*Heji* 37363, Period V; the last part of the Shang dynasty).

Crack on *renchen* [day 29]. The king divining. "[We shall] hunt at X, going and coming [there will be] no misfortune." The king prognosticated and said: "Auspicious." [It was] in the tenth month. This [was] used. Capture of 6 deer. (*Heji* 37608, Period V).

We note that the basic topic of divination in these hunting inscriptions was whether or not the hunt would be auspicious and successful; either simply with regard to the king's hunting, or more in detail, regarding the proposed time, place, companions, or the appropriateness of the choice of hunters when the king opted for delegating the hunt to others and was not himself (explicitly or implicitly), the chief hunter; all this is included in the stated charge or charges. A "typical" divination made in anticipation of a hunt may also express a concern for the weather (rain, wind etc.); or for the choice of hunting method.

3.2.2 How? Hunting methods, and implements

The methods used in the royal hunt included driving game, either using only people (perhaps foot soldiers, and other officers aiding the king), fire, or war chariots. Sometimes the driving was specified as a means of forcing the wild game into pitfalls or traps. The latter are sometimes also mentioned separately, as are various forms of nets. The only identifiable method where the hunters actually struck the animals was with arrows (no other such method is specifically mentioned). Although it is also possible that the people used for driving also used spears or pikes (to defend themselves in case of danger or for actually killing the prey), this does not seem to be mentioned. Other specific tools or weapons used for catching and killing animals

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in the hunt will be mentioned below, in connection with each different method of hunting.[272]

The original terminology of the hunt can be divided into three groups, representing different semantic levels. These three levels are not always represented, not even in completely preserved inscriptions, but this is the general pattern.[273] They are used in this sequence:

Hunt [general] —> specific method —> catch [identity and/or amount]

The first is a *general* word for hunting (*tian* 田, *shou* 狩, etc.), used to indicate the general context of the action or where it will take place (occasionally, two such words are used in combination, and the full meaning is not always completely clear). Next, one of a series of different verbs connoting *specific methods* for catching the prey is used; the meaning is again not always clear but the grammar and function is generally unambiguous. Finally, one of three terms for "capture" is used, announcing the *enumeration* of the captured prey, most often (but not always) at the very end of each inscription. Thus the pattern is: "Hunting [at such and such a place, together with such and such a companion, etc.] ... by means of ... , we got ... "

The presence of terms from the second and third groups are what proves conclusively that it is really hunting that is taking place, as when the prey is named and listed in the verification as *fait accompli* (therefore this can be ascertained even in very fragmentary inscriptions showing only the words " ... capture deer ... ," or " ... capture." The captured prey at times includes not only wild *animals* but also people, then known as *qiang* 羌, i.e. non-Shang "barbarians" (of which more later on).

Among the general terms, the two most prominent are *tian* and *shou*. The word *tian* was not used commonly in Dong Zuobin's Period I, but increasingly in II-V; the other prominent word, *shou*, shows the opposite development, and was occasionally used conjointly with *tian*. The two words may thus at least during one period of time have had different connotations.[274] Keightley suggests that a shift of connotations may have taken place, with the briefly used *tian-shou* perhaps to be read as "to take to the field and hunt," with the meaning "to hunt" later completely transferred to the word *tian*.[275] Such shifts in meaning are, of course, clearly possible over a time span of several centuries.

Inscriptions in which the "general" words are used alone, without enumeration

[272] For general overviews of Shang weapons and other tools, see Shih Chang-ju, "Xiaotun Yindai de chengtao bingqi," *Bulletin of the Institute of History and Philology* 22 (1950), 19–84); K.C. Chang, *Shang Civilization*, 198–97 (with Shih's illustration); Bernhard Karlgren, "Some weapons and tools of the Yin dynasty," *Bulletin of the Museum of Far Eastern Antiquities* 17 (1945), 101–44, pl. 1–40; Li Ji, "Ji Xiaotun chutu zhi tongqi," *Zhongguo kaogu xuebao* 1949.4; Yang Hong, "Jia he kai; Zhongguo gudai junshi zhuangbei zhaji zhi san," *Wenwu* 1978.5, 77–83, Yang Hong, *Ancient Chinese Weapons* (New York: Science Press, 1992), etc. See also 2.2, above; and the review in Wang Yuxin et al., *Jiaguxue yibai nian*, 559 ff.

[273] My division into three semantically distinct categories differs from those scholars who collapse the various terms into "hunting methods" (for example, Huang Ranwei, "Yin wang tian lie kao"). For further examples and discussion of certain rarely mentioned hunting methods, see too Hu Houxuan, "Buci zhong suo jian zhi Yin dai nongye," 44–47; Wang Yuxin et al., *Jiaguxue yibai nian*, 559 ff.

[274] That is, in Period III. Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 1174, lists 8 such examples from Period III (except 2, which are from Period IV).

[275] Keightley, *Sources of Shang History*, 180–81; 180 n. 24.

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of prey, are not, strictly speaking, immediately classifiable as "hunting inscriptions." The identification of such general hunting terms in principle rests on supplementary mention of the procedure and results of the hunt. As an example, consider the inscriptions using "*wang tian* ... ," commonly translated as "the king 'hunts' ... " which alone take up seven pages in Yao Xiaosui's eminent concordance,[276] about 500 examples in all: Of these, only 50 (or, 10%), actually include an explicit note that anything was caught;[277] the other 450 inscriptions fail to specify hunted animals, or to include a report of caught prey. This indicates either that the hunt (*tian*) on that day was unsuccessful or the result was not recorded for some other reason, or that the activity *tian* did not always include hunting. When several possible locations are raised on the same bone, the goal may have been to determine an auspicious location, not more; also, it must be remembered that the inscriptions primarily reflect divination, and were not created primarily as historical records. The verification "appendix," confirming what happened, may not always have been desirable. Also, in sets of divinations, not all individual queries obtained an approval that may lead to the actual carrying out of an anticipated hunt. Or the hunters may have returned empty-handed, and so there is no verification record. To complicate matters even further, *tian* also may have had a related, but different, meaning of chasing wild animals away from agricultural fields, perhaps without killing them.[278] In sum, it is not certain that all inscriptions which use *tian* (or some of the other general words) without prey enumeration really do mean that hunting occurred, or was even intended.[279] In the entire oracle bone vocabulary, precise meanings of words are often imperfectly understood. Meaning is never "obvious" (and also cannot be understood "genealogically") but must primarily be interpreted by means of confirming the context, which in the case of hunting generally means looking for the presence of wording reflecting both the actual result of the hunt, and the presumed action.

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[276] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, Vols. 1–3 (Peking: Zhonghua, 1989). Most of these particular examples are dated to Period III (ca. 220 items), or V (ca. 150 items).

[277] Except for one from Period II, all of these are from either Period III (22 inscriptions, only about 5 of which specify the catch) or Period V (28, in which case, on the other hand, all except for one damaged inscription specify and enumerate the various animals caught). Some Period I inscriptions using *tian* include notes on the catch, but do not include the king as actor. Since the king is the central figure in most other oracle bone divinations, he may be assumed to have been the chief actor even in those cases where he is not mentioned explicitly.

[278] Yang Shengnan, "Yinqi buci 'tian' zi shuo," 62.

[279] Hsü Chin-hsiung (*The Menzies Collection*, xxxiii-xxxvi) examined the patterns of five series of inscriptions from the same bone that used *tian* (all from Period V) and found that there seem to have been cases when the king hunted only once over a period of forty days, or only once in 30 days (this rests on the additional assumption that the bone in question was the only one used to divines about hunts within this time-frame). Hsü apparently misinterprets the phrase *zi yu* which is often tagged on to Period V inscriptions, rendering it as "chariots were used" and taking it to mean that there was a hunt, inflating the number of hunts somewhat.
The phrase *zi yu* or *zi yong* is a "usage notation" either appended to, or replacing crack notations. It should rather be understood to mean "this was used": i.e. this particular crack could fulfill its role in the process. This "used" doesn't necessarily mean that a hunt was carried out, and *zi yong* cannot, as Chen Pan proposed ("Gu shehui shoulie yu jisi zhi guanxi," 9), mean that the animals were "used" in sacrifice, as in later Classical Chinese usage. The few hunting inscriptions where this expression occurs (Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 149–50) always has it occurring after the divinatory charge and before the verification, so Chen's interpretation runs against the usual syntax of the oracle bone language.

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In the following, the five general verbs deployed in the accounts of the Shang royal hunt are discussed, with examples. They are included here because they frequently occur in association with prey enumeration, but the last three, as in the case of *tian*, may have involved a broader semantic field than hunting.

3.2.2.1 Five general hunting terms: *tian, shou, bu, she,* and *ge* (A-E)

A. *tian* [田; modern 田], meaning "to [take to the] field"; "to hunt": the graph is similar to the modern Chinese character for the noun "field," a picture of a square divided by internal strokes into four units (sometimes more). The division of land for agricultural activities may be one of its original meanings,[280] and the use of *tian* as a noun for "fields" constituting part of Shang-controlled territory is attested in some inscriptions.[281] There are examples suggesting *tian* may mean actual "farming" (tilling of the land)[282] but there are only very few cases that indicate this clearly:

> Crack on] *yimao* [day 52] ... divining: "[If we] call [on X] to *tian* at Y, [then we will] receive a harvest."[283]

It has also been suggested that *tian* (i.e. "field") is used for, and should be taken to mean, "hunting" because of what it does for the fields: clearing them from harmful wild animals (*wei tian chu hai* 為田除害). Hunting is indeed frequently linked with the clearing of fields in later historical periods, historically and ethnographically, not least in swidden farming where the deployment of fire to clear forest creates the opportunity for hunting.[284] By extension, the usage of *tian* for royal hunting could be explained by what the king does to the wild in the hunt, "turning the wild into fields."[285] The name of the place for the hunt is not always provided, but certain place-names did serve both as the location for hunts and for farming—indicating that hunting with fire and opening new fields may indeed have been if not synony-

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[280] Yang Shengnan, "Yinqi buci 'tian' zi shuo," 56. For examples of the use of *tian* also see Li Xiaoding, *Jiagu wenzi jishi* (Taipei: Academia Sinica, 1965), Vol. 13, 4025.

[281] Here, *tian* is differentiated from the several *yi* 邑 or "settlements/cities" that were also attacked by these outsiders (and may refer to agricultural fields). See, for example, *Heji* 6057, where non-Shang enemy people (Tufang, Gongfang) are said to have intruded on *wo tian* 我田, "our fields" of the eastern and western *bi* xx, a territorial unit. This *bi* is often understood as smaller territorial units attached to the attacked state (E. Shaughnessy, personal communication, July 1994).—I understand the *wo* 我 used in this pair of inscriptions to mean "our," and not as a reference to the Wo mentioned in Period I inscriptions as a tributary polity (Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 59). This *wo* is probably a royal plural "We" or a genitive "Our" (as suggested by D.N. Keightley, on the basis of *Heji* 6098 [I], where "the king himself" (*wang zi*) attacks the enemy and hopes for ancestor assistance for "Us" (*wo*), the latter "us" thus not a reference to all Shang people, but specifically to the divining king.

[282] Chen Mengjia, *Yinxu buci zongshu*, 538–39; 539–49 (his discussion of Shang agriculture).

[283] Quoted from Luo Zhenyu, ed., *Yinxu shuqi houbian* 2, 40.15 (not included in Yao Xiaosui's *Yinxu jiagu keci leicuan*).

[284] See the comparative ethnographic data discussed by Wang Ningsheng, "Shi tianlie," in *Wang Yuzhe xiansheng bashi shouchen jinian wenji* (Tianjin: Nankai daxue, 1994), 152–62; also Yin Shaoting, *People and Forests: A Human-Ecological History of Swidden Agriculture in Yunnan* (Kunming: Yunnan Education, 2001), and Yang Shengnan, "Yinqi buci 'tian' zi shuo," 61. Zhang Bingquan's suggestion (cf. Yao Xiaosui, "Jiagu keci shoulie kao," 41) that hunting was called *tian* simply because the agricultural fields would be trampled during the hunts is less productive.

[285] If so, *wo tian* (of *Heji* 6057A, B; etc.) may mean "our fields" in the sense that the king's action makes them fields of the Shang. We note that many such places were frequented by non-Shang people prior to the king's "taking to the field" there. This could also supports such an explanation.

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mous, then at least increasingly related, especially in the last period.[286] The fact that *tian* increasingly becomes the general word for hunting in the later periods (i.e. coupled with animal victims of the hunt) may also reflect the acceleration of such a process of expansion.

The word *tian* was also used for an office ("Keeper of the Land"), not to be confused with the verbal use of *tian* 田 (modern transcription, *dian* 甸). Similar titles include "Hound-Keepers" (*quan* 犬, and "Herdsmen [*mu* 牧])."[287] Such armed officials, stationed in outlying areas by the king, sometimes also are mentioned as capturing enemy prisoners (most often termed *qiang* 羌, "barbarians") and presenting them to the king;[288] these various officers also hunt and catch animals (see below, 3.2.4). The king himself, and his act of putting himself at risk in the hunt, is the main topic of interest in the inscriptions, however. There are numerous examples:

> "Crack on *renchen* [day 29]. He [a personal name] divining: If the king hunts, [there will be] no misfortune." (*Heji* 28440, III).

The divinations may be made well in advance:

> "Crack on *jiayin* [day 51]. The king said: Divine. On the next *yimao* [day 52], [if We?] hunt, [there will be] no misfortune. At Gu."[289]

The word *tian* is, as mentioned, sometimes used in combinations with other words. In one rare case, *tian* is used in a hunting inscription along with what is apparently a specification of the weapon used (*Tunnan* 4556). Another, more common combination is with *xing* [, modern 省], the meaning of which is believed to approximate "inspection," thus "field/hunting-inspections" carried out by the king himself or by others assigned by him.

There is often concern for the weather (especially wind and rain, as might be expected when hunting). For example:

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[286] Qiu Xigui, "Jiaguwen suo jian de Shangdai nongye," 218–20, 225. Qiu cites a *Zhongguo nongxue shi, chugao* 中國農學史初稿 (Draft History of Chinese Agriculture) part I, p. 43, which also discusses the coincidence of *tian* "farming" and *tian* "hunting," using the same graph, arguing that this must have been because killing wild animals helped expand agriculture. Qiu cites Zhang Zhenglang's (1973) mention of a Tang dynasty poem on burning the forest, killing animals and opening fields for farming in one stroke, and suggested that this could have been the same during the Shang period (e.g., more than 17 centuries earlier). For more examples, see Wang Ningsheng, "Shi tianlie;" Yin Shaoting, *People and Forests*.

[287] Cf. Keightley, *The Ancestral Landscape*, 111 etc. Qiu Xigui, "Jiagu buci zhong suojian de 'tian' 'mu' 'wei' deng zhiguan de yanjiu," *Wenshi* 19 (1983), 1–14, quotes numerous examples to refute the view that *tian* was a Shang rendering of the later, and different, office of *hou* 侯. The *tian* office survived, at least in name, in the *dian* 甸 title in the early Zhou and later times (Qiu Xigui, op. cit., 1, quoting the "Jiu gao 酒告" and "Shao gao 少告" chapters of the *Shangshu*, and the bronze inscription of the Da Yu *ding*; Wang Yuxin et al., *Jiaguxue yibai nian*, 457 ff.). The late Shang *tian* seems to have been an office established to supervise agriculture in outlying areas stationed there by the king, and are sometimes mentioned by name (Qiu Xigui, op. cit., 5 ff.). In late Shang bronze inscriptions *tian* is also used as a proper name (i.e. "Tian made this bronze...," Qiu Xigui, op. cit., 4). There are divinations about the king attacking an enemy in the company of such and such a *tian*, indicating that they were also engaged in military endeavors.

[288] Qiu Xigui, "Jiagu buci zhong suojian de 'tian' 'mu' 'wei' deng zhiguan de yanjiu;" compare also the similar Zhou-period offerings, in Gao Zhiqun, "Xianfuli yanjiu," *Wenshi* 35, 36 (1992), Part I, 6, and the conclusions.

[289] *Heji* 24471, II. Here, a place-name is given at the end of the inscription, presumably indicating the place where the divination took place. This type of specification became more common in period V. It is rare that the king appears at the beginning of the inscription, as in this case.

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"[If] the king [*xing Yu tian* =] inspects Yu fields in the early morning, [then] there will be no rain" (*Heji* 29093, III).

"The king should not hunt [*tian*] on a *ren*-day [for if he does, the weather] will be overcast, [and his expedition] will encounter heavy rain" (*Heji* 28680, III).

Some scholars have read the first of these two examples as an "inspection of the hunt [*tian*]," the king inspecting someone else's hunting—an awkward construction,[290] and no inscriptions of this type mention any capture of prey.[291] It may be another indication that *tian* was also a word for some more general activity, which may not include the hunting of wild game. But the *tian* ("fields") in the combinations "*xing* ... *tian*" and "*tian xing* ... " can also be understood as the object of inspection different from the verbal *tian*. Other such objects of *xing* occasionally include "elephants" (*Heji* 32954, IV; perhaps not an elephant stable but rather a place called Xiang; that graph often stands for a personal name or a place in the inscriptions); "fish" ([*yu*], a fish pond, or "fishing," *Tunnan* 673, III); "millet" (*Heji* 9612, I); or ordinary "cattle" [*niu*]:

"Crack on *bingyin* [day 3]. Que divining: The king goes to inspect cattle ... "[292]

Since there is never any game "captured" on such *tian* "inspections," *tian* probably here refers to physical "fields"), and they may not have been done primarily to check on wild game. In the light of the many other inscriptions that address a need for rain or the hope for a rich harvest (*shou nian*),[293] the object of inspection may have been agricultural potential, or farming progress. A small number of divinations concerning the appropriateness of "inspecting fields" are carved on the same bone as, and follow directly upon, divinations about *tian* or *shou*;[294] and the "inspection" of fields also could have been a substitute for a hunt in those fields, i.e. an inspection of a hunting-ground.[295]

The verbal *tian* is also used in other combinations where prey is involved,

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[290] Keightley, *Sources of Shang History*, 181 n. 28.

[291] Shima Kunio, *Inkyo bokuji sôrui*, 103; Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 211–12 (more than 60 examples each); see also the discussion by Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 59.

[292] *Heji* 11170, I; Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 212. In another example, the "inspection" of cattle is delegated to others (*Heji* 11177A and B, quoted by Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 60). Both Chen Weizhan and Meng Shikai (Meng Shikai, "Shangdai tianlie xingzhi chutan," 1983) suggest that the "inspection of cattle" referred to domesticated cattle (*niu*), not wild (since *niu* are never hunted—see, however, note 329 below).

[293] See examples in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 943–44.

[294] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 59–61, quoting *Tunnan* 271, 2269; *Heji* 28609 etc.

[295] Chen Weizhan ("Youguan jiaguwen tianlie buci de wenzi," 61) rejects the earlier view of some other scholars, such as Yang Shuda, that *xing* itself meant "to kill" or "to hunt" and was related to or identical with the word used for "hunting" (in the autumn) in later literary sources; he cites Shang and Zhou bronze inscriptions where the word *xing* is used as "inspect" in the same way as in the oracle bone inscriptions. Wen Yiduo believed *xing* should be interpreted as having three aspects: inspection, hunting, and making war ("Shi 'xing'; 'xing'," in *Wen Yiduo quanji* [Peking: Sanlian, 1982], II, 526; also quoted in Matsumaru Michio, "Yinkyo bokujichû no denryôchi ni tsuite," 154), but there is probably a significant difference of meaning between "inspection" and "hunting," suggested by their actual use alongside each other in the same divination inscriptions; the lack of objects of capture also runs against this view.

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including the delegation or invitation to others to hunt;[296] the names or titles of such persons may or may not be specified.

In summary, there may have been several meanings to *tian* and capturing wild animals clearly was one important aspect. We do not know exactly why this graph was used in the sense "hunting," but its graphical characteristics and its usage history does imply a close connection with agriculture related to the symbolic clearing or preparing of fields, either indirectly, or directly by killing off the wild in order to transform and incorporate land into domesticated agriculture. In many cases, given the right context, it can properly be translated as "hunting."

B. *shou* [; modern 獸, or 狩], "to hunt": the graph for this verb is composed of an implement thought to be hunting equipment,[297] and a dog. This has led to generalization about the use of dogs in hunting which is highly probable, but for which there is actually no firm evidence, only indications of this suggested connection (and the office of the Dog-Keeper mentioned above). As mentioned, dogs were frequently used as individual grave offerings at almost all levels of society; there are also many oracle bone inscriptions that indicate the sacrifice of dogs (i.e. separately, in sacrificial pits). One example of such a non-hunting inscription:

> Crack on *jiawu* [day 30]; "*you* [sacrifice] to Father Ding: dogs, one hundred; sheep, one hundred; split [animal offerings, *mao*], 10 cattle; 10 dogs, 5 more dogs; split cattle, one."[298]

The translation of *shou* as a general term for "hunting" is supported by the wide range of animals that figure as the prey of (*shou*) hunting. They can even include fish (if only very rarely), as in *Heji* 10918, I:

> "[... if] the king [will] hunt the fish of Hao [he will] capture."

This underlines that *shou* refers to hunting more generally, and not just hunting-with-dogs (to cover even fishing, where dogs are not usually involved). This is confirmed by examples where the king will *shou* ("hunt") but specifically avoid a certain specific method, as evidenced by this pair:

> Crack on *jisi* [day 6]. [We will] hunt [*shou*] [by] [*zhu* =] driving."
>
> Crack on *jisi* [day 6]. [We will] hunt, [but] not [*zhu* =] drive." (*Heji* 10612A and B, I).

As mentioned, *shou* is sometimes used with other words, such as in *wang shou* 往狩, "to go [out] and hunt," in Period I:

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[296] I.e. "*hu* ... tian," "calling on ... to hunt," as in *Heji* 10558: "... Que divining. [We shall *hu* =] call on Long ['Dragon'] to hunt at ..."); alternatively "*ling tian*," "to order to hunt" (see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 801–802) (but not "*hui* X *tian*," "let it be X who hunts") (see too 3.2.4).

[297] The main reason is the association of this verb with prey as its objects. The implement could also have been a weapon, or some device or "flag" signaling an identity as "hunter."

[298] *Heji* 32698, IV; more examples at Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 605–609. In later texts, the *quan ren* is said to have had duties consisting in sacrificing dogs. For example, see the "Qiuguan 秋官" section, "Sikou 司寇" chapter in the *Zhouli*, the late Eastern Zhou description of Zhou ritual practices.

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"The king himself [will] go [out] and join [in] the hunt." (*Heji* 10611, I).

... divining: "The king should not go [out and] hunt joining with X." (*Heji* 10939, I).

Another combination encountered in Period V is *she shou* 涉狩 (see below under *she*). As mentioned, it is also used with *tian* (perhaps in a transitional period before *tian* became the most commonly used word for "hunting"):

Crack on *xinchou* [day 38]. "On a following *ren*-[day], The king will *tian shou* [take to the field hunting] ... " "Greatly auspicious." (*Heji* 28775, III).

In short, *shou* is a prominent general term for hunting. Also, it is probably the most common term in the early part of the late Shang period.

C. *bu* [; corresponds to modern 步], "[to hunt while] marching"
The graph simply consists of two "foot" components. The basic meaning may have been "to go on foot." There are nearly 400 known inscriptions using the word *bu*, again corresponding to the general structure.[299] Some scholars believe the term was specifically used for hunts in conjunction with the military campaigns of king Di Xin 帝辛 during the last part of the Shang dynasty.[300] In much later times, in the Western Zhou, it was used to mean "travel."[301] Chen Weizhan believed *bu* meant traveling not by foot, but by chariot, and listed four points supporting its close relation to the royal hunts.[302] First, it is found juxtaposed with *zhu* 逐 (drive, pursue), such as in one paired inscription:

Crack on *bingshen* [day 33], Zheng divining: "If the king pursues [*zhu*] elaphure deer [*mi*], [he will meet =] catch up with [them];"

Crack on *bingshen* [day 33], Zheng divining: "The king *bu*." (*Bingbian* 88, *Heji* 10345, I).

Furthermore, in a number of cases *bu* is used together with *tian* and *shou* where these terms clearly indicate hunting. The king will, for example, divine about hunting at a place and then go on to *bu* at that same place. Chen Weizhan justifiably disagreed with those scholars who have taken these first two facts as proof that *bu* can be translated as "to hunt"—in fact they only indicate that *bu* is related to it in some way.[303] Third, inscriptions divining about *bu* often note the capture of animals in the verification; fourth, locations chosen for *bu* often coincide with hunting grounds. Notes on capture are actually, however, rare.[304] One of the inscriptions quoted by Chen is damaged, and ambiguous. It may originally have used a different word for "hunting":

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[299] See Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 283–88. The majority is from Period I; a small number derives from all other periods.

[300] Huang Qingxin, *Yindai tianlie yanjiu*, 14 (citing Dong Zuobin's *Yin li pu*).

[301] E. Shaughnessy, personal communication, July 1994.

[302] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi."

[303] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 52; the examples are few, and include those that are not in the same inscription but occur together on the same bone.

[304] Present in only ca. 1% of 400 *bu* inscriptions listed in Yao Xiaosui's *Yinxu jiagu keci leicuan*.

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> ... the king *bu* at ... no misfortune. The king ... ; [and] captured foxes ... (Heji 37504, V)

Yet another damaged inscription suggests that the activity *bu* was something supplemented by hunting on an opportunistic basis if game was encountered:

> Crack on *xinchou* [day 38]. Divining: "[If] the king went to *bu*, [and] [*ni* =] antlerless deer [*lai* =] come forward [he will] not ... " (*Heji* 13568, I).

Other examples are: *Heji* 24346 ("the king will capture when returning from *bu*-ing"); *Heji* 27998 (limited to saying *bu*, and "capture"); also 37475 (V):

> The king's crack, on *gengzi* [day 37]. At Mai-zi [?]. Divining: "Today [we] *bu* at Zeng (?), [and] there will be no misfortune." [It was] in the first month. Capture of foxes, eleven.[305]

The relation between *bu* and hunting is clearly present, but may actually be indirect. This is further supported by the manner of the occasional mention in *bu* inscriptions of one of the more specific hunting methods:

> Crack on *gengxu* [=day 47]. X [= Diviner's name] [divining]: "Let it be the next day [that] *bu* [is done]." Shot [with arrows] one *si* [= wild cattle] at X (*Heji* 20731, I)[306]

In *bu* inscriptions, concern about the weather, is mentioned more often than with *ge* (*Heji* 12043 etc. mention rain, and 11274 etc. clear weather in the verification). Also, in a way similar to the *ge*-inscriptions, there are occasional examples of the word *bu* used alongside *shou*:

> Crack on *xuzi* [day 24]. Zheng divining: "[The king] should not *bu* [and] [*shou* =] hunt. Ninth month. At X." (*Heji* 10993, I);
>
> Crack on *gengzi* [day 37]. "[If] the hunt (*shou*) [is carried out, and on] *xinchou* [day 38] [we] *bu*, [then it will] not rain." It really did not [rain]. Ninth [month?] (*Heji* 20760, I)

Another example indicates a close association of *bu* and military operations:

> "Let it be in the [Shang *fang* =] 'land of the Shang' [that we] *bu* [and] erect [possibly = carry out a sacrificial rite] to [our ancestor king] Tai Yi, [and then] attack the land of the *qiang* [= 'barbarians']." (*Heji* 27982, III)

There is also a *bu* inscription that identifies the *geren* ("dagger-axe men"[?]), a kind of soldier often engaged in warfare, as participants in a *bu* operation.[307]

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[305] Translation adapted from Keightley, *Sources of Shang History*, suggesting (29; 29 n.9) that on the basis of standard dating practices during this period, the words "it was" should be inserted. The record of captured animals may also have served as a record of the time of the event (that is, the Shang were using the capture of a certain number of animals as a mnemonic device so as to remember the date by referring to that particular capture).

[306] Incidentally, this example refutes Chen Weizhan's assertion ("Youguan jiaguwen tianlie buci de wenzi," 52) that all animals mentioned as capture in *bu* inscriptions are foxes.

[307] *Heji* 39868, no capture. On *geren* see too below, 3.2.4.

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Considering the tiny number of captures resulting from *bu* activity and the use of this term alongside *shou*, we can conclude that *bu* probably also did not primarily mean "to hunt," but may have been a word for aggressive military maneuvers also suitable for hunting. The term was mainly used in the early part of the late Shang dynasty, and the activity seems to have been conducted on foot (or where, the king, specifically, moved on foot). It can be translated as "to march," or as "[to hunt while] marching."

D. *she* [; suggested modern equivalent graph: 涉], "to hunt"(?), "to march"(?): this word is not usually listed as related to hunting in the oracle bone scholarship, but I introduce it here since, like *bu*, it does appear to have a similarly close association with hunting, and also with warfare. The graph is composed of one "foot" on each side of a flowing river. It may have had the meaning of "crossing" or wading over streams or rivers, not only on foot but presumably also by boat or raft. It is often used with a named river as the direct object of the action,[308] and is also often combined with both *shou* and *tian* (thus "hunting while crossing over wetlands"). The divinations *Heji* 28338–40 and 28883 (III) concern the king's crossing a river and hunting (= *tian*); *Heji* 10602 uses a combination with *shou*:

> Crack on *dinghai* [day 24]. Bin divining: "The king [will] go [and *she shou* =] hunt in the marshes."

The combination *she shou* 涉狩 may literally mean "wade across and hunt,"[309] and the word *she* possibly also have had slightly broader connotations, such as perhaps "going into the marsh."

E. *ge* [; "modern" 迄]: "exercise," "maneuver" [?], "hunting while war-gaming": the term *ge* has been transcribed as *guo* (過), or *wu* (武), and is most often translated as "hunting."[310] The graph is composed of two parts, indicating "foot"/"locomotion," and a weapon (*ge* 戈, dagger-axe), respectively. It is sometimes conflated with the similar *tun* (屯), but there, another component replaces the dagger-axe.[311] Yao Xiaosui lists nearly 400 inscriptions, almost exclusively from Period III and V.[312] Following the *Heji* editors, who list the two graphs together, Yao collapses *tun* and *ge* into one. Actually, all Period III inscriptions apparently were written with *tun*, and all Period V inscriptions as *ge* (which shows more variation than does *tun*). Chen Weizhan believes *tun* means to temporarily occupy or defend a place, *ge* on the other hand involves movement (of troops)—but at least one example quoted in support of this for *tun* also involves movement.[313] It is possible that *ge* replaced *tun* over time.

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[308] For examples, see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 289–90.

[309] Or "boat across," according to Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi."

[310] For example, by Matsumaru Michio, "Yinkyo bokujichû no denryôchi ni tsuite."

[311] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 45–49.

[312] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 866–72.

[313] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 47: cf. "...the king expects to *tun* from (e.g. *cong*, see below under 2.3.4) the east," in *Heji* 28765, quoted by Chen as *Yi* 196 (from *Yinqi yicun*).

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Most of the divinations concerning both *tun* and *ge* are concerned with the king's activity at some time and place in ways similar to *tian* and *shou* inscriptions, and the place-names involved are often known hunting grounds.[314] The word *ge* is the only one of these used alongside *tian*;[315] and it is also only in the Period V *ge* inscriptions that any capture of prey is mentioned.[316] One example (*Heji* 37440):

> Crack on *yichou* [day 2]. Divining: "The king *ge* at Shao. Going [there] and coming [back], [there will be] no misfortune." Ninth month. This was used. Capture of 1 deer.

Additional specifications of methods of capture are never mentioned together with *ge*. This may be a further indication that this word did not actually directly mean "hunting," but at the same time was indirectly related to it. The view that it primarily refers to some form of military exercise, show of force, or maneuver is probably correct.[317] The lack of explicit references to hunting methods in inscriptions using *ge* may be explained by that the king or his army simply used their regular weaponry to kill occasional game. The same general meaning of military exercise may also apply to the related word *tun* (even if there is little indication that *tun* also was related to hunting).

To summarize the five general terms, A-E: *tian* is a general verb which often, if not always, refers to hunting (still, further research is needed to investigate its broader implications). The word *shou* is also a general verb for hunting, perhaps the only one which is unambiguously translatable as "hunting." The other general verbs discussed above (*bu*, *she*, and *ge*) refer to activities that were indirectly related to hunting (*bu* more closely related, *she* and *ge* more indirectly), but which allowed it and were eminently suited for it.

3.2.2.2 Specific hunting methods

In the following, a number of the specific methods used while performing "hunting" are briefly presented, in the approximate order of frequency.[318]

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[314] But Hsü Chin-hsiung observed that while the locations mentioned for *tian*-expeditions in Period III and V largely coincided, those for *ge* constitute a new, different set of locations (arguing against Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," 147). This could be taken to imply that military exercises were concentrated in a new area, in response to geopolitical changes. Hsü suggested that this is also supported by the lack of concern for the weather in divinations using *ge* (Hsü Chin-hsiung, *The Menzies Collection*, xxxiv). However, there is actually a number of *ge* inscriptions indicating weather concerns: *Heji* 29712, 31229, 36739, and 38177, etc.).

[315] Chen Weizhan, "Youguan jiaguwen tianlie buci de wenzi," 48) says *ge* is more often used together with *tian* than is *tun*: In fact there seem to be no cases of *tun* and *tian* used together at all (however, this could of course reflect the increasing predominance of *tian* over *shou*). Also, *tun* is (only possibly) used alongside *shou* only once, in one damaged inscription: *Heji* 29027, III).

[316] In only 5 cases, with only single deer mentioned (Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 871).

[317] It is supported also by *Heji* 36426, where the word *ge* is preceded by what appears to be a gathering of the army (*zu* 族 or perhaps *lü* 旅), literally: men under the flag, who will proceed to *ge* at a specific place. On this graph, see Liu Zhao, "Buci suojian Yindai de junshi huodong," *Guwenzi yanjiu* 16 (1989), 73–83.

[318] See too Wang Yuxin et al., *Jiaguxue yibai nian*, 559, counting and presenting different hunting terms, some of which are rare or obscure.

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zhu [; modern 逐] "driving" (and/or "pursuing"):
This word is composed of a "foot" and a "boar" component occasionally replaced with a "dog" or a "hare"(?) component.[319] These forms appear to be used interchangeably in the main sense of the term. The graph is also used as a clan name or personal name (and as a diviner's name in period II-III). Driving game animals within the shooting range of hunters is an ancient, widely used hunting method, well suited for hunting while clearing fields for agriculture (as discussed above, under *tian*). When the method *zhu* was used, large numbers of people may have been employed to drive the prey animals within the shooting range of the king.[320] And indeed, divination is often concerned with the direction of the approach to the prey:

> "[... if we] pursue elaphure deer at Xing, [approaching] from the east, west, and north, [then there will be] no calamity." (*Heji* 28789, III).

Here the prey is probably entire herds of deer, which may have lent themselves particularly well to this type of hunt. In one example, 30 deer are pursued:

> Crack on *dinghai* [day 24]. The king [divining]. [We will] let it be 30 deer [that] we drive [*zhu*]." [We] really did drive, [and] caught 16 [deer]. First month.[321]

On such occasions, the king and accompanying hunters may have been riding in chariots. These were high-status objects, together with the horses they depended on and which were probably imported from afar,[322] and as such were important element of the Shang royal hunt.[323] There are a number of inscriptions that record the use of horses and chariots in hunting."[324] Chariot inscriptions with *zhu*, as one of the specific hunting terms include the famous example with an accident where the king and a companion, Ziyang (a noble frequently asked to join the king's hunts[325]), were riding in chariots:

> Crack on *guisi* [day 30], Que divining. "There will be no misfortune this [ten-day] week." The king prognosticated and said: "This, too[?], [has =] is dangerous

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319 Yao Xiaosui, "Jiagu keci shoulie kao," 42.

320 One suggestive description of how this encircling and driving might have taken place can be found in the Jesuit writer Gerbillon's vivid eyewitness accounts of the Qing Emperor Kangxi's hunting in 1691–92. On one occasion troops formed a large circle, narrowed down slowly by soldiers moving towards the spot where the emperor and his sons waited on horseback, shooting mountain goats with arrows as the animals converged. As the goats tried to break out, the emperor's hunting hounds were set loose and allowed to kill goats on their own. Several soldiers were punished for letting some goats escape or for firing shots near the emperor. On another occasion, a tiger was similarly encircled, and the soldiers equipped with "Half-pikes of broad Iron-Heads" to fight the tiger should it come near and drive the tiger (also using dogs, arrows and stones) towards the emperor who (surrounded by soldiers with pikes) killed it with a musket gun. Then, "all the Grandees of the Court went to see the Tiger... and made their Court to the Emperor on this Occasion" (J.-B. Du Halde, *A Description of the Empire of China and Chinese-Tartary* [London: Cave, 1738–41], 342, 342–43; on Manchu imperial hunting, also 333–36, 345–48; and Ma Dongyu, *Xiongshi sifang: Qing di xunshou huodong* [Shenyang: Liaohai, 1997]).

321 *Heji* 10950, I; Yao Xiaosui, "Jiagu keci shoulie kao," 43.

322 Chariots were an exclusive offering in royal tombs, and occurred elsewhere only in separate, special pits. Horses are recorded as tribute in several inscriptions but *never* as the object of hunting (on chariots, see above, 2.2.2 and 2.2.3; on domestic animals as offerings but not hunting prey, see below).

323 E. Shaughnessy, "Historical perspectives on the introduction of the chariot into China," 199 ff., Wang Yuxin et al., *Jiaguxue yibai nian*, 494–95, etc.

324 For an interpretation where the "crack notation" *zi yu* (see Keightley, *Sources of Shang History*, 119) is read as "charioteering," see E. Childs-Johnson, "The metamorphic image," 36 (Yao Xiaosui, "Jiagu keci shoulie kao," 143 ff., see especially p. 150, where it appears as a "crack notation," not as charioteering).

325 Wang Guimin, *Shang Zhou zhidu kaoxin* (Taipei: Mingwen shuju, 1989), 235.

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> [?]; a bad omen." On *jiawu* [day 31] the king went to pursue wild cattle [*si*]. The minor official [*xiaochen*] in charge of the chariots and horses overturned the king's chariot, [and] Ziyang also fell."[326]

There is a closely related word, *zhui* (: 追, "pursuing"), used in ways similar to *zhu*, but never for animals, only for human enemies, such as those of *fang* (enemy) polities.[327]

The objects of *zhu* driving are deer (including elaphure deer, common deer, and antlerless deer), pigs (boars), a form of bird,[328] and *si* (wild cattle). These are all animals that lend themselves to hunting by "driving."

she [; modern 射] "shooting [with bow and arrow]": the graph is an obvious rendering of a bow and an arrow (different from the *she* 涉 ["to wade or boat across"] mentioned above). The bow and arrow clearly was an important part of Shang weaponry. In his reconstruction of the Shang arsenal, Shih Chang-ju suggested that the bow was made of buffalo or cattle (*niu* 牛) horns and sinew, and that arrows were wooden with arrowheads made from bone, antler, shell, or bronze.

The objects of *she* appear to be limited to elaphure and other deer, wild cattle (*si* 兕, as in *Tunnan* 2922), and (only rarely) boars, or foxes; some may have been shot in the field, and some killed back at the temples.[329] The word *she* can also be the name of an official, or Archer.[330]

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[326] *Jinghua* 1; *Heji* 10405, I; translation adapted from E. Shaughnessy, "Historical perspectives on the introduction of the chariot into China," 214.

[327] In just one exceptional case, it appears that the word is used for the pursuit of *qiang* humans (*Bingbian* 441). See Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 1164–165; Liu Zhao, "Buci suojian Yindai de junshi huodong," 121, quoting Yang Shuda, *Jiweiju jiawen shuo: buci suoji* (Peking: Chinese Academy of Science, 1954), 15. Yao Xiaosui ("Jiagu keci shoulie kao," 42) suggests that *zhu* 逐 can be used for people, and *zhui* 追 for animals, but the cited examples are from the much later Eastern Zhou period.—In one inscription, *zhui* is preceded by "marching," *bu* (*Heji* 20463).

[328] Perhaps a pheasant. Four examples are cited in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 329.

[329] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 1011–1013. Huang Ranwei ("Yin wang tian lie kao") cites one example of a *niu* 牛 (the graph for domestic cattle, otherwise only seen used in sacrifice) is *she* 射 (*Ninghu* 390). For wild animals, it possibly reflects a tradition seen the later Zhou, in which (according to later literary sources such as the "Chu yu 楚語" chapter of the *Guoyu* 國語, cited in Chen Pan, "Gu shehui shoulie yu jisi zhi guanxi," 5), the Zhou king or Son of Heaven must personally shoot the sacrificial animal (*sheng* 牲) in the sacrificial rituals for which he is responsible, and a feudal lord "must personally shoot an arrow into his *niu* 牛" when rituals are performed in his ancestral temple, personally assuming the role of sacrificer on behalf of his community which becomes cast as the sacrifier ("sacrifier" referring to the role of sponsor or beneficiary of sacrifice, as distinct from the "sacrificer," the actual performer; this follows Hubert and Mauss, *Sacrifice: Its Nature and Function* (Chicago: University of Chicago Press, 1964), cf. Valerio Valeri, *Kingship and Sacrifice: Ritual and Society in Ancient Hawaii* (Chicago: University of Chicago Press, 1985), 37. On this ritual, see too Cai Zhemao (Ts'ai Che-mao), "Shesheng zhi li," in *Yinli zongkao* (M.A. thesis, National Taiwan University, 1978, 39–58; as mentioned in E. Childs-Johnson, "The metamorphic image," 37 n. 98).

[330] I.e. as either *she* 射, *duo she*, *xin she*, *duo xin she*; or *san bai she* (Liu Zhao, "Buci suojian Yindai de junshi huodong," 87–90, Chen Mengjia, *Yinxu buci zongshu*; Wang Yuxin et al, *Jiaguxue yibai nian*, 459). This may be related to the archery rituals known from later times, as in the Western Zhou period, when the *she li* 射禮 doesn't seem to involve capturing prey. The Zhou king, who is always present (according to the bronze inscriptions which mention them), invite allies to come and shoot, and to receive arrows, quivers, etc. as royal gifts. But in one Western Zhou bronze inscription, the Mai *zun*, the king shoots birds from a boat together with a visiting *hou* 候 lord who is then "awarded" weapons. See Shirakawa Shizuka, *Kinbun tsūshaku* (Kobe: Hakutsuru Bijutsukan, 1962–85), 11.60.628–46, esp. 632–37. This Zhou ritual has been interpreted as a means of testing (and cementing!) the loyalty of vassals (cf. Liu Yu, "Xi Zhou jinwen zhong de sheli," *Kaogu* 1986.12, 1116). On the archery rituals of the later Zhou, see also Yang Kuan, "She li xin tan," in *Gu shi xin tan* (Peking: Zhonghua, 1965), 310–37; Ito Seiji, "On the shooting ritual of ancient China," *Minzokugaku kenkyu* 23 (1959), 185–202.

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xian [𠂤; modern 陷], "trapping": there are several different graphs used for "trapping," simply displaying different entrapped prey in a pit or trap. The prey are mostly various forms of deer; occasionally wild cattle (*Tunnan* 2589). The graphs also vary in utilizing either a "pit" (凵) or a "well" (井) as the component for what the animal falls into, presumably there was a difference in scale. As always, the phonetic reading given here is based on the modern character for trapping, which is often used to transcribe all the various oracle bone "trapping" graphs. Typically, the king first "traps" and then again "catches" a number of deer, revealing that "trapping" is a specific method. When two small upward-pointing lines are added emerging from the bottom of the pit in the character, we may suspect that these represent upward-pointing spears on the bottom of the pit (such as those often used by hunting peoples in modern times). A graph appearing immediately before the word for "trapping-of-*mi*-deer" has been interpreted as "whip," an implement used to drive the deer towards the traps, or pitfalls,[331] by Yu Xingwu, who also discussed "trapping" graphs that depict dogs, sheep or *niu*, placed in a pit in a similar way. Dogs and *niu* bovines were not hunted, but they were, as we have seen, common in sacrificial pits at Anyang (see 2.2.3). Thus those graphs should be read "[ritual] burial [of dogs, etc.]." There is indeed at least one example of a "burial" pit with deer (at the royal tomb WKGM1; 2.2.3), but reading the hunting inscriptions with "trap/burial" graphs containing deer as "burials" would force a difficult re-interpretation of the crucial word "obtain," seen in so many hunting expeditions where the animals are pursued or shot, including in inscriptions recording the trapping of deer. Although the structure of the depicted pit may appear similar, the sacrificial pits for bovines, sheep and dogs are often written with four dots (two below, two above), perhaps representing the burial pit fill.[332] Such dots are rarely seen in the hunting inscriptions that mention trap-pits.[333]

The king apparently did not take part directly in trapping, but if it involved driving game into pitfalls, either using people or with fire (see below), the hunt would still include a dramatic aspect more like the other forms of royal hunting.[334] One inscription suggests precisely this scenario:

> Crack on *bingwu* [day 43]. X divining: "When the king goes to trap, he will drive."[335]

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331 Yu Xingwu, *Jiagu wenzi shilin* (Peking: Zhonghua, 1979), 273, example 4 (cited as *Yi* 7680).

332 Yu Xingwu, op. cit., 270; 272; plus 5 more examples on p. 274–75.

333 In fact, I have not been able to confirm any examples of this. An alternative would be to read the dots as blood, but this would leave the problem of the two types of animals treated differently unexplained. Yao Xiaosui et al. (*Xiaotun nandi jiagu kaoshi*, 153) suggested that several graphs where a human body is seen in a pit surrounded by dots are depictions of human enemies being "trapped" in the same way as animals, but this is unlikely. The graphs probably also depict the burial of such people in "sacrificial pits." One of the quoted inscriptions (*Heji* 19800, I) says that the person is being buried/trapped "at the gate," where "gate" (*men* 門) may be a place-name ("Men"), but even so the main verb used in the example, again, appears exclusively used with other domesticated animals (see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 217–19).

334 In more recent times, trapping generally has been used by lone hunters. See Carleton S. Coon, *The Hunting Peoples* (London: Jonathan Cape, 1972), 104–108. But driving large prey into pitfalls required more people. This form of hunting has become rare in modern times, due to the sharp decline in wildlife worldwide. It is not inconceivable that the king did visit traps and nooses in the fashion of the lone hunter known from various ethnographic records, but that seems less likely.

335 *Huai* 931, I; quoted in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 321; from the catalogue *Huaite* (White) *deng shi suo cang jiaguwen ji*, not included in the *Heji*.

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fen [; modern 焚], "[driving with] fire": this method is less common, which would not be surprising (it probably was seasonal, dangerous, and very demanding). It is described using a graph that has two forms: one shows fire under trees (sometimes one tree, but mostly two), and the other with an added hand component (i.e. setting fire to the woods). The graph can also be used more generally, to refer to other fires (such as with the burning of (enemy?) granaries in *Heji* 583B, 584A[336]). When used in hunting, it is closely related to *zhu*: i.e. driving game animals using fire, instead of (just) with people. The only animal recorded as caught using the variant with a hand holding the fire is the tiger (and this in just two inscriptions). It is possible that *fen* did involve carrying torches:[337]

> "The king will [set, or: hunt, with] fire at Dou [?], and it will be at the foot [of the mountains at Dou]." The king stood in the east. [A] tiger emerged, [and was] captured.[338]

The numbers of animals killed at one event using this method can be staggering, and the species are often mixed up, as seen in *Heji* 10198 (one tiger and 159 deer, etc.).[339] Almost all of the 20 or so examples given in Yao's concordance come from period I.[340] Examples:

> "On the following *guimao* [day 40], [we] will [hunt with] fire, ... [and] capture. On *guimao*, [we] really did [hunt with] fire, captured ... *si* [wild cattle], 11; pigs, 15; tigers, ... ; and hares [?], 20. (*Heji* 10408A, I).
>
> " ... [hunt with] fire [and] drive [*zhu*]; ... the troops [?] at X." ... month. (*Heji* 10691, I).

In the second (badly damaged) inscription, it seems possible that foot soldiers were involved in setting fires to "drive" animals. The only other examples of *fen* divinations where capture of animals is recorded, are from period III:

> " ... on [a] *ji*-day; ... [hunt with] fire at Hai [?]." The capture [had =] included *si* [wild cattle] (*Heji* 28799, III).

When hunts using fire were planned, the concern about wind and rain was obviously likely to be greater than otherwise, as is indicated some divinations.[341] In summary, *fen* refers to hunting where the prey is flushed out and driven out with fire,[342] and the amount of captured prey can be very large.

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336 Yao Xiaosui, "Jiagu keci shoulie kao," 43.

337 As suggested by Yao Xiaosui ("Jiagu keci shoulie kao," 43), this may be the method referred to in the *Shijing* poem no. 78, "Shu yu tian 叔于田."

338 *Heji* 28799, III. The "tiger" graph here is not the most common variant and has also been interpreted as standing for other animals (Yao Xiaosui, "Jiagu keci shoulie kao," 44).

339 Cited in Wang Yuxin et al., *Jiaguxue yibainian*, 561.

340 Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 473–74.

341 In the *Tunnan* groups of hunting inscriptions discussed by Yao Xiaosui and Xiao Ding (*Xiaotun nandi jiagu kaoshi*, 126–27). They suggest "rain" is *bu ji* 不吉 ("inauspicious") and "no rain" auspicious which makes sense for when one wants to set a fire (but actually the expression *bu ji* doesn't seem to appear at all in the inscriptions [cf. Keightley, *Sources of Shang History*, 40]).

342 It does not primarily, as some have suggested, refer to slash-and-burn agriculture. Qiu Xigui pointed out that the two were not mutually exclusive (Qiu Xigui, "Jiaguwen suo jian de Shangdai nongye," 218). For a further discussion see Wang Ningsheng, "Shi tianlie."

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tu [:], "netting": there are a variety of graphs that include a net, ranging from just the "net" (网); via graphs where the net is hand-held, but no prey is shown; to graphs where the net is accompanied by one of several "netted" animals. Ding Su counted ten different forms of animals depicted under a net in such graphs.[343] An example:

> "[If we] use nets [we will capture] deer. On the next morning [we] really captured." (*Heji* 28322, III).

In "netting," there is also concern for the wind, suggesting perhaps that animals were probably driven into nets, and it was important that they did not catch the scent of the hunters (including that of the king!) much too early, if at all:

> Crack on *jiayin* [day 51]. [If We] call on Ming ['Bird's Call'] to net birds [he will] capture]. On *bingchen* [day 53] there was wind. Captured 5." (*Heji* 10514, I).

The animals caught by various forms of "netting" are mostly deer. In one case, a tiger(?) was caught (*Heji* 10307A, I); in still others, birds.

zheng, or *wei* (?) [; modern 征, or 圍], "to attack," "to encircle, surround"(?): the graph consists of a pair of feet, and a "mouth" component. It has been interpreted by some as an equivalent of the modern graph "to encircle" (圍).[344] Most scholars read it as *zheng* 征 (to attack or to "launch a punitive expedition against"), as in the numerous inscriptions with divinations about Shang warfare against various enemy countries (*fang* 方), or about performing *zheng* at some location; an identical graph is used in a number of inscriptions that also use a word for "capture," and where *qiang* enemies are the object.[345] One inscription once cited to suggest that *zheng* is a hunting method is damaged, but the main verb is *shou*, followed by a *zheng* (with only one "foot"):

> [Crack] on *dingmao* [day 4]. "[if? ...] hunt [and] *zheng* ... [we shall?] net [animals]." [We really?] captured 162 deer, 114 ... , ... 10 pigs, one X.[346]

There is one inscription, however, which seems to be an exception to the rule that *zheng* does not take wild animals as objects:

> Crack on *jiyou* [day 46]. Divining: "[If] Que goes to *zheng* pigs, [he] will not capture." [At] X. Tenth month (*Heji* 6979, I).[347]

But even so, there is little basis for regarding *zheng* exclusively as a hunting method. It may be a military term that is also related to hunting.

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[343] The phonetic reading as *tu* 兔 is based on the use of a "hare" component. Ding Su, "Qiwen shoulei ji shouxing zishi," 33B, 49B–50A; also Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 225. With deer, only the heads are shown under the net (apparently elaphure and antlerless deer, only used in Periods I and III).

[344] Huang Qingxin, *Yindai tianlie yanjiu*, 13.

[345] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 309–11.

[346] *Heji* 10307, I, cited by Huang Qingxin, *Yindai tianlie yanjiu*, 13.

[347] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 323 renders the object of the verb *zheng* in this inscription as "dogs" (or Dog), but it seems it could equally well be "pigs" (as in Yan 1965: 12A).

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As for further specific hunting methods, there are an additional few which are used only very rarely, and precisely what is involved is therefore less well understood. One example is the rare word used in *Heji* 5739, 5740 where the Duoshe ("Many Archers") are called on to " and capture."[348] The word *bi* [ ], otherwise used in the name of several royal consorts, also appears as an attribute of animals indicating female sex,[349] and as hunting method, perhaps using some special weapon:[350]

> "If the king hunts at ... [and] let the Tiger-troops *bi*, [he/they] will capture, [and] no misfortune." This was used. (*Heji* 27915, III).

The word *li* (?) is used as a word that may stand for hunting, in just a few cases, where the object is wild cattle (*si*). An example:

> Crack on *dingmao* [day 4]. Divining at Tun. "Cha [having] reported [and] said [*si* =] wild cattle have appeared at Yang [Xiu?], the king lets it be today that [he shall] "*li*." There will be no misfortune." Capture. (*Heji* 37392, V).

Another example of rare methods is the graph with a hand holding a net over a boar ( ):

> "[Crack on] ... *yin*. The king should not call on Ge ["Dagger-axe," a type of soldier, or a personal name] to X."[351]

The graph looks as a variation on the third word for "capture" listed below; the only difference is that a boar has replaced the bird. But it is here used in the function of hunting method. But the only example of an explicit capture is one where the particular type of activity denoted by this verb follows a campaign against an enemy where "five people" are "captured" (*Heji* 1021). It is perhaps not a hunting method, though the graph composition is suggestive ("capturing people as if they were bears").

There are additional rarely used words, not discussed in detail here.[352] However, fishing (*yu*) should also be mentioned. Fishing is uncommon in the record, and actual fishing methods do not seem to have been recorded. I have mentioned that it is once used as a specification of the general hunting term *shou*. The lack of interest in divin-

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348 It is transcribed differently by Liu Zhao, "Buci suojian Yindai de junshi huodong," 89, and by Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 660.

349 See Jin Xiangheng, in *Zhongguo wenzi* 9 (1963); for further examples see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 10; Zhang Bingquan, "Jisi buci zhong de xisheng," *Bulletin of the Institute of History and Philology* 38 (1968), 186, etc.

350 Yao Xiaosui, "Jiagu keci shoulie kao," 46.

351 *Heji* 10713; more examples at Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 378.

352 One graph quoted by Huang Ranwei ("Yin wang tian lie kao," 19B–20A) also does not seem to be a hunting method, but rather a word meaning "to catch up with" or "get [a shot at (?)]" such as is implied in *Heji* 190, I where the divination charge was about wild cattle, but the verification says that wild cattle could not be had, but "two boars were captured."—Lei Huanzhang ("Si shi shi") lists three additional, little-known hunting methods; Qiu Xigui ("Jiagu buci zhong suojian de 'tian' 'mu' 'wei,'" 224–26) identifies a word ( ) which appears to mean "clear for farming" and often involves catching wild animals (*Heji* 28320, 28345 etc.). See too Wang Yuxin et al., *Jiaguxue yibainian*, 559 ff.

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ing about fishing could be an indication that the greater prestige value in the display of game hunting was of more interest to the kings.[353]

Falconry is yet another hunting method that was possibly also used, but it is apparently not mentioned in the oracle bone inscriptions. It would be expected to leave few traces in the archaeological record—although some seem to have been found.[354] Like fishing, it might be used together with the use of poison on arrows, or other weapons.

We should also note the glaring absence from the inscriptions of the dog, in its probable role as hunting assistant (in driving and cornering game, etc.). As mentioned, it is frequently encountered both in sacrifices seen in the inscriptions, and as burial offerings in the archaeological remains (often together with armed human "guardians"). The absence of hunting dogs in the inscriptions might simply be due to the fact that it seemed obvious or self-evident to the Shang diviners that dogs would join in the hunt. Note, however, that it is also curiously, and almost "completely neglected" in artistic representations.[355] Representations of dogs and certain other animals may, of course have been restrained by Shang beliefs or prohibitions such as taboos. On the other hand, an official with the title *quan* or "Dog [-keeper]" does have a role as a royal assistant (see 3.2.4), and it is still likely that dogs were involved in hunting in the field.

3.2.2.3 Enumerations of captured prey, "to get," or "capture"

qin [; modern 禽], "capture" (alternatively, "bag," or "net"): this graph, for which the pronunciation is uncertain (it has also been transcribed as *bi*), is the simplest version of a series. Here it is composed of a "hand" and a "net"(?). understood as the combination of those two.[356] Even if the upper part of the word indeed should can be interpreted as a net, the word is clearly used in a more general sense than "netting," as indicated by the many examples of inscriptions stating that the king hunts (*shou*, or *tian*) and then the capture is enumerated using this word. Many inscriptions specify one of several different specific hunting methods prior to using this term, to express "capture." Examples include *Heji* 33371, and *Tunnan* 2626, where the king hunts with pit-falls and then captures (*qin* 禽), in the latter case, "700 elaphure deer;" and *Heji* 27902, where the king first uses bow and arrow, and then captures (*qin* 禽). Alternatively, to express what may have been an original sense of "netting," but still retaining a distinction from the following word, this graph could tentatively be rendered as "to bag," or "to net" in a general sense.

The word is sometimes used conjointly with *huo*, the next word discussed here, but only for capture of animals and not human enemies, as with *huo*.[357]

[353] Cf. *Heji* 10918, I; Tunnan 673, III, mentioned above; further examples of *yu* are given in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 673–74, perhaps precedents for the much-later Western Zhou royal fishing ritual (Jing *ding*, in Chen Mengjia,"Xi Zhou tongqi duandai," Part 3, 120).

[354] The birds of prey found in Xiaotun pits (such as M217; see above, 2.2.1 and 2.3.2) may have been used in such hunting (but the identifications remain unclear).

[355] Li Ji, "Hunting records," 15.

[356] *GSR*, 407.

[357] See, f.ex., Liu Zhao, "Buci suojian Yindai de junshi huodong," 123–24.

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huo (?)-A [; modern 獲], "get, capture": the graph is composed of a hand and a bird component, i.e. "grabbing a bird." It may have had such a meaning earlier, but in the oracle bone inscriptions it clearly is a word which already had acquired a more abstract, general meaning. It is used for the capture of *both* animals *and* human enemies.[358]

huo (?)-B [; modern 獲], "get, capture": the graph resembles both of the above, but includes a "net" in addition to the hand and bird components, i.e. "the grabbing/netting of a bird." It may or may not include an additional "hand" (as if reaching for the bird on top). As the one above, it has a more abstract and general meaning, and it is also used for the capture of both animals and of human enemies.[359]

There are at least four more verbs expressing "capture": two different graphs using the components *shi* (in later texts = "scribe") and "pig"; as well as *fu* : 俘 is "to take captive");[360] and *zhi* : 執 "to take captive" or "to shackle." The latter words refer specifically to the capture of human enemies, mostly if not always in a situation of war, and apparently never to the "capture" animals.[361]

3.2.3 What? Identification and quantification of the prey

Elaphure and other deer were the most common prey, but captured animals also included wild cattle and buffalo, foxes, boars, tigers, hares, pheasants or other birds, and, rarely, some other animals (such as fish, and elephants). Identifying the various prey is complicated, since many graphs used for captured animals are obscure, or variable. While it is most often perfectly clear that they depict animals, or at the very least have once been intended to depict animals (they often are obvious depictions of four-legged animals), an exact identification to living animal species is not always possible. Moreover, scholars have identified the graphs with different animals and there is considerable confusion. Moreover, Shang classification of animals as expressed in the written form of their language might have changed over time, and it may also have differed significantly from our present zoological systematic classification (itself an evolving system). If we could travel back to the Shang period and investigate Shang animal nomenclature, we might find that Shang categories don't correspond to the 20th century taxonomy applied to the recovered skeletal remains from Anyang (outlined above, 2.3.2).

Against this background, how should we, for example, explain the fact that while a number of skeletal remains were identified, no bear has so far been identified in the oracle bone inscriptions? Perhaps the bear remains recovered were really pre-Shang, and thus irrelevant for our discussion; alternatively, the bear is represented in writing by some unidentified graph (of which there are many); or some graph may

[358] Liu Zhao, op. cit., 123–24.

[359] Liu Zhao, op. cit., 123–24.

[360] On the taking of prisoners in war, and the word *fu*, see Yao Xiaosui, "Shangdai de fulu," *Guwenzi yanjiu* 1 (1979), 337–90.

[361] Liu Zhao, op. cit., 124. There is a small number of examples in which antlerless deer, or wild cattle, are "taken," using this word (Yao Xiaosui, "Jiagu keci shoulie kao," 48).

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have been misinterpreted—or the bear may have been subsumed under some other "native" category.[362]

In our search for order we may begin by noting that the number of graphs for hunted wild animals (with the exception of deer) is much smaller than in those used for domestic animals, where there is a great proliferation of forms, including in the divinations specifying what animals should be used in sacrifices to different ancestors.[363] Because the domestic animals were closer to home, detailed differentiation of color patterns, etc., could be made at leisure; wild animals, however, were probably seized upon for their identity as species, to which attributes are attached, and not because of individual shades of difference (as with the domestic victims of sacrifice, readily available for the leisurely choice of victims of a certain color, with certain stripes, etc.). This may be part of the explanation why, furthermore, many wild animal names are also used as a person's name.[364]

Still, there are certain observations, and even identifications, that can be made of animals mentioned in the inscriptions. Below, the most commonly hunted animals seen in the inscriptions are listed, again roughly in the order of frequency, with brief notes on the identification as well as on the methods used to capture them:[365]

* *mi* [; modern 麋]: Elaphure (or David's deer, *Elaphurus davidianus*)
As with all the "deer" graphs, this is a rendering of an animal with an exaggerated head (the outgrowths depicted on top are generally understood as indicating the marked elaphure "eyebrows," not its curious and seemingly more obvious horns![366]). As mentioned, this animal is sometimes captured in large numbers (the highest number of elaphure deer caught in one single hunt in any inscription is 209, caught by trapping (*Heji* 10349, I). This is not counting the inscriptions that are not fully recognizable hunting inscriptions, but only use the graph for "trapping" or "pitfall," with an elaphure depicted inside: In one of these, as many as 700 trapped elaphure deer are mentioned (*Tunnan* 2626, IV).—Other methods used for catching *mi* deer are shooting with arrows, and driving (*zhu*).

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[362] Witness, for example, how common bears in modern Chinese are called *gouxiong* 狗熊, "i.e. "dog-bear," in the "popular" classificatory system used today. This is not to say that the Shang did not distinguish bears from other animals. Similarly, the fact that the Shang written language does not seem to have a category "animal" doesn't mean that the Shang did not conceptualize this distinction; or, for that matter, the distinction between animals and humans or a category including "human" enemies (i.e. *qiang*), even when captured in ways similar to hunted animals. Such distinctions were evidently made, either linguistically or by other means (differential mortuary treatment, etc.).

[363] Ding Su, "Qiwen shoulei ji shouxing zishi," *Zhongguo wenzi* 21–22 (1966), 1A-B; also Zhang Bingquan, "Jisi buci zhong de xisheng." See too Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 579–605. On the oracle bones from the Huayuancun discovery at Anyang in 1991, which further confirm a wild/domestic divide where the *qiang* barbarians have been placed on the "wild" side, see Liu Yiman and Cao Dingyun, "Yinxu Huayuanzhuang dongdi buci xuanshi yu chubu yanjiu," *Kaogu* 1999.3, 295; and the discussion in the conclusions.

[364] Such as when prefaced by "Zi" 子. These names could probably be translated literally (for example, Zilu 子鹿 = "Zi-the-Deer-Trapper;" the connection to deer-trapping need not be immediately descriptive, but referring to some incident in the past, perhaps not even in the same generation. I have not been able to locate any examples of such a person actually mentioned together with a hunting operation.

[365] See Ding Su, "Qiwen shoulei ji shouxing zishi," *Zhongguo wenzi* 21 (1966), 1–28; 22 (1966), 29–59; also Chen Mengjia, *Yinxu buci zongshu* (Peking: Zhonghua, 1956); Huang Ranwei, "Yin wang tian lie kao" *Zhongguo wenzi* 14–16 (1964–65); and Huang Qingxin, *Yindai tianlie yanjiu* (Taipei: National Taiwan University, 1977), 76.

[366] Yao Xiaosui, "Jiagu keci shoulie kao," 47. For more examples of the use of *mi* also see Li Xiaoding, *Jiagu wenzi jishi*, Vol. 10, 3063.

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* *lu* [; modern 鹿]: [a type of] deer; probably the common Sika deer (*Cervus nippon*; Chinese *meihualu*; or, perhaps, the Red deer, *Cervus elaphus*).
The graph has a pair of high, three-forked horns, in this case the attribute chosen to signify the animal. This animal is also hunted in large numbers (the highest is 162, in *Heji* 10307, I, i.e. lower numbers than for the elaphure). Capture is by the same methods; in a few cases also by "netting" (*Heji* 10976, I; 28329, III). One inscription (*Cuibian* 951) specified that live *lu* that were captured, suggesting that the "captures" really generally involved killing the animals).
* A related form of deer, which usually shows only one antler and a more "geometrically uniform" head (but similar in shape to the *lu* antler), is often identified with the modern *zhang* 獐, i.e. river (or "water") deer.[367] This identification apparently has been based only on the occurrence of river deer bone in the Anyang deposits, for which no other correspondence has been found (and it may be incorrect).[368] Yao Xiaosui's concordance treats the two different forked-antler forms as one, and there is some justification for this. For example, in one set of nine inscriptions at *Heji* 10950, I, presumably a divination about one deer-hunt (and with just one verification confirming the capture of 19 deer), both the abbreviated form, which also appears with a pair of antlers, and the form with a more elaborate head (but only one antler) appear.[369] (But this would leave the archaeologically confirmed river deer remains without a corresponding term in the oracle bone record).
* *ni* [; modern 麑?]: antlerless deer. This graph is often rendered in the literature as corresponding to the modern *ni* 麑, "young deer, fawn," since it does not show any antlers.[370] The graph is very similar to that rendered as "elaphure," and the only difference is the lack of "eyebrows."
* *tu* [; modern 兔]: hare, or rabbit. The graph is very similar to that used for the "antlerless deer" and the only difference is that the deer has a neck, the "hare" does not.[371] There is also an upward-pointing tail. The identification with a hare is possible, but weak. This animal, seen in only ca. twenty inscriptions (mostly from Period I), is nevertheless sometimes captured in large numbers.[372]

[367] Huang Qingxin, *Yindai tianlie yanjiu*, 76.

[368] Chen Mengjia (*Yinxu buci zongshu*, 554–55) rendered both this "abbreviated" graph and the following antlerless deer as *zhi* 旨, but gave only one example, also cited by Yao Xiaosui ("Jiagu keci shoulie kao," 53) as the only occurrence of the animal in the inscriptions, and transcribed alternatively, as *zhi* [ ]. Yao here apparently misquotes the *Shuowen jiezi*: the entry for *zhi* (10A.19, p. 469) does not say "like the mountain goat [*shan yang* 山羊], with one horn," but "like a bovine [*niu* 牛], with one horn" (in particular, Yao Xiaosui (*Yinxu jiagu keci leicuan* [632–33]) used for another, distinct animal with a pair of unforked sharp horns [Shang graph =] which was not hunted but only offered in sacrifice, in Period I).

[369] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 644–48; the collapse of the two forms is justified by suggesting that one shows the deer from the front, the other from the side (Yao Xiaosui, "Jiagu keci shoulie kao," 49). But the *lu* depicted sometimes has only one antler (*Heji* 10950, I; 10327, I, etc.).

[370] Depending on the species of deer, it could also refer to "doe." But this is less likely, since there is another pair of graph forms are used to indicate the sexes of various animals (occasionally for tigers, and often for cattle: *mu* for bull, and *bin* for cow—using the very component which here stands as a single graph). The graph indicating "female deer" is still in use today (*you* 麀, doe). It is not unlikely that Shang people would associate antlerless females of a species where the males have antlers with that same species, and use the same graph for females when a herd was captured. Also, there are antlerless deer species which may fit the *ni* graph could have been used for (such as musk deer, *Moschus chinensis*). Thus it seems prudent to translate the graph as "antlerless deer." For other views on deer identification, see too E. Childs-Johnson, "The metamorphic image," 26–28.

[371] See Yao Xiaosui, "Jiagu keci shoulie kao," 53.

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* *zhu* [; modern 豬]: pig, or wild boar. The graph is in most cases identical to that used for domestic pigs. The distinction between the two is then made solely on that (judging from skeletal remains) there were domesticated pigs at Anyang, but also remains of wild boar, and the domesticated pigs could not have been driven and captured. The graph is also similar to that for dogs (: 犬), and the identification as pig or boar is made on the basis of the larger belly, sometimes absent in the dogs.[373]—In a number of cases, an "arrow" is added to the graph (through or alongside the pig body), it is then transcribed as *zhi* 彘, boar, by most scholars. But the two graphs are used interchangeably in the context of hunting and sacrifice inscriptions (pigs with no arrow are given in verifications with hunting prey; pigs pierced by arrows are used in ancestral sacrifice, etc.)[374] and there seems to be no clear distinction between the two (the same goes for the graphs that instead add a "mouth," or a "meat" component). It should be noted that the graph with an arrow is used almost exclusively in Period I, and is only rarely seen after that (not at all in Period V). There may thus have existed some distinction that disappeared later.[375]
* *hu* [; suggested modern equivalent 狐]: fox. This is a tentative definition. Some scholars have rendered it as "wolf."[376] The graph describes a dog-like animal with an added phonetic component. Many Chinese scholars, especially in the past, have transcribed this graph as *wang* (亡犬, retaining the Shang graph's phonetic component, presumably because of a reluctance to equate it with the fox[377]). The equation is made on the basis of the perceived ancestral relation of the phonetic component of the Shang graph to that of the modern character for "fox." These "foxes" are sometimes caught in large numbers: the record quantity is 164 (in *Heji* 10198, I).
* *si* [; suggested modern equivalent, 兕]: wild buffalo. The graph emphasizes huge horns (or a horn!) on the animal's head. It is captured through *zhu* 逐, pursuit, occasionally with fire (in *Heji* 10408, I), and/or *she* 射, shooting with arrows.[378] The graph is believed to correspond to *si* 兕, a character used in later Chinese texts, the meaning of which has long been unclear. In my view, the root cause of the problem is probably the (proto-historic/Shang) extinction of wild

372 20 or 30 are mentioned; 73 in *Yingguo suo cang jiagu ji* 856, IV; more than 70 in *Heji* 13331, I (cited in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 640).—The graph is sometimes confused with a similar graph only used for personal names (Huang Qingxin, *Yindai tianlie yanjiu*, 76).

373 Yao 1981: 51.

374 *Pace* E. Childs-Johnson, "The metamorphic image," 25 n. 61.

375 See *Heji* 20662, I: "Let it be [arrow-pierced] pigs, sheep, and boars [that are sacrificed?]..." But here the arrow-pierced "pigs" do not have the characteristic pig belly, and may be wolves or foxes, or dogs (still listed as *zhi* 彘 " pigs" by Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 619; pigs and boars are listed on pp. 611–20). checkxx.

376 Huang Qingsheng, *Yindai tianlie yanjiu*, 76; Huang Ranwei, "Yin wang tian lie kao," II, 28A.

377 See Qiu Xigui, "Jiagu buci zhong suojian de 'tian' 'mu' 'wei...'," 3 (quoting *Yinxu wenzi waibian* 殷墟文字外編, 1934). (The correspondence was first suggested by Guo Moruo, *Buci tongcuan kaoshi*).

378 Lei Huanzhang (Lefeuvre, Jean A), "Si shi shi," *Zhongguo wenzi* 8 (1983), 89–90, cites Hu Houxuan's list of frequencies of different words used for the hunting of *si* 兕 (Hu Houxuan, "Buci zhong suo jian zhi Yin dai nongye," pt. 2, 1945, pp. 44–45)—this list is not very productive because all these words are necessarily specific hunting methods; as I have suggested, *huo* (capture) need only mean that the animal was included in the result of the hunt, and *shou* is a general word meaning "hunting." On *si* as a wild bovine (cattle or buffalo), see below.

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bovines and lack of attention to the zooarchaeological data. This has given rise to a long-standing controversy over whether the oracle bone graph referred to wild buffalo or cattle, or to rhinoceros/unicorn, and over the issue of whether the animal it referred to persisted in the area into later historic times. Even after the identification as bovine of the famous 1929 skull, inscribed with the oracle bone graph in question (2.2.1),[379] there has been some discussion about the meaning of the character, and of the fate of the rhinoceros in China. The issue, including the use of the character in the oracle bone inscriptions and in Shang and Zhou bronze inscriptions, has been reviewed by Lefeuvre, who argued convincingly that it cannot mean rhinoceros because a) the oracle bone character appears on what is definitely a bovine skull; and b) the scarcity of rhinoceros remains and large number of bovines in the Anyang faunal remains (2.3.2) speak against it. The so-called "*si*" is frequent in the inscriptions, and sometimes hunted in large numbers. This supports a bovine identity (most likely a buffalo). Not one of the possible rhinoceros species congregate in big herds in the wild, while most bovine species do.[380]

* *hu* [; modern 虎]: tiger. The graph for the tiger is characterized by its emphasis on the large teeth in a widely opened mouth, and also a long tail and clearly indicated claws on the feet. The bronze forms are especially obvious[381] and some bone forms have characteristic stripes, but there is a striking amount of variation and also progressive stylization[382]—and although the open jaws and the claws

[379] In association with this larger skull, a deer skull with an inscription mentioning a royal hunting expedition was also found. Although it had been damaged precisely where it would mention the captured species, Dong ventured it would say "deer"; suggested a correspondence between the animal mentioned in the inscription, and the bone; and also pointed out that *si* and deer are sometimes recorded as captured during the same hunt (Dong Zuobin, "Huo bai 'lin' jie," 327). There are other examples revealing just such an identity between the subject matter of the inscription and the bone on which it was written, on bones not used in pyromancy (for example, human and deer skull bones inscribed with non-divination inscriptions, as well as the tiger bone mentioned above). Keightley (*Sources of Shang History*, 7–8) says that most such inscriptions are from period V, and are records of either hunts or sacrifices; the vast majority of oracle inscriptions used in pyromancy are, of course, made on turtle shell bovine scapulae (the proportions of cattle or buffalo has not been conclusively resolved). On the raw material of Shang oracle divination, see Keightley, *Sources of Shang History*, 6–12; Chen Mengjia, *Yinxu buci zongshu*, 4–9; and especially, Okamura Hideki, "Indai ni okeru shusan no henkaku," 25–36; 29, table 4.

[380] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 628–31 (a total of ca. 140 inscriptions); the maximum seems to have been 40 animals killed during one hunt (*Heji* 37375, cited by Wang Yuxin et al., *Jiaguxue yibai nian*, 563–64). On this issue, see Jean A. Lefeuvre (Lei Huanzhang), esp. "Rhinoceros and wild buffaloes north of the Yellow River at the end of the Shang dynasty," *Monumenta Serica* 39 (1990–91), 131–57; Dong Zuobin, "Huo bai 'lin' jie"; Tang Lan, "Huo bai si kao," *Shixue nianbao* 1.4 (1932), 119–121; Soame Jenyns, "The Chinese rhinoceros and Chinese carvings in rhinoceros horn," *Transactions of the Oriental Ceramic Society* 1954/55, 31–62, pl. 15–26 (on the previous Giles/Laufer debate); Carl Whiting Bishop, "Rhinoceros and wild ox in ancient China," *China Journal* 18 (1933): 322–30. Some scholars still argue that the character means rhinoceros (see for example, Yao Xiaosui et al., *Xiaotun nandi jiagu kaoshi*, 151; Wang Yuxin et al., *Jiaguxue yibai nian*, 563–64), probably because they have not considered the archaeological record and remain too much influenced by later texts. In addition, the rhinoceros holds a powerful fascination for the human psyche which goes beyond the attraction of the buffalo (a formidable illustration of this is the grand finale of Federico Fellini's masterpiece, *E la nave va*).

[381] Yao Xiaosui, "Jiagu keci shoulie kao," 50.

[382] Stylization should not be understood solely as a temporal progression. The choice to stylize or not may also have had religious or symbolic meaning (Keightley, *Sources of Shang History*, 109, 109 n. 75). As Keightley points out, Ding Su's suggestion ("Qiwen shoulei ji shouxing zishi") that animal graphs were simplified as they became more familiar is too simplistic.

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remain in the stylized forms, the translation "tiger" should probably not be taken as a secure reference to the species we know but rather be understood as meaning "large cat": either leopard or tiger (the remains of both species were present in Shang storage pits, according to Shih Chang-ju [see 2.2.1, and 2.3.2]).[383]

* *zhi* [; modern 雉]: pheasant (?). This graph depicts a bird, most often with an added "arrow" component, which corresponds to a modern character for "pheasant." The catch varies from a few up to 27 (*Heji* 10197, I, cited above). Interestingly, they are almost always recorded last in the verifications, as if less important; and specific methods are seldom mentioned (*Heji* 10514, I, says pheasants are "netted").
* There is also another, unidentified bird ( ) which is "driven" (*zhu*) in several cases and which may therefore also be some form of large ground-living bird.[384] In addition, there are a few cases (*Heji* 4725, I) where birds represented by a simpler graph usually transcribed as *niao* (鳥; without the elaborations of the pheasants[?], above) are hunted. Similar "birds" that are shackled (chicken?) are also used as sacrifices along with sheep, pigs, and dogs.[385]
* *xiang* [; modern 象]: elephant. The graph is recognized on the basis of its depiction of a long trunk. Again, some bronze forms are very obvious depictions,[386] but the oracle bone forms are much more stylized and the identification of those graphs is perhaps not as straightforward as many scholars seem to have believed. The southern tapir, while not indigenous to the Shang area, also has a distinct trunk, and (just as elephants and rhinoceroses) it was portrayed very accurately in bronzes.[387] Thus it is certain that the Shang were definitely familiar with all three animals and some oracle bone "elephants" may possibly have been tapirs.

The number of elephants captured in hunts is never large, ranging from one to three.[388] No specific method is mentioned. There has been much debate over a related graph used in Period I, with an elephant led by a human hand, possibly an indication that elephants were indeed tamed.[389] The debate has been inconclusive, and all three possibilities (that the elephant was a wild hunted animal, that it was

[383] There is a graph for leopard, similar to that of the tiger, which can be distinguished in some cases where the body has spots instead of stripes (Yao Xiaosui, "Jiagu keci shoulie kao," 50–51). In stylized variants, the distinction is not possible to make. The "leopard" graph is always used as a personal name (such as *Heji* 10055, I) and is not seen as prey in hunting inscriptions).

[384] Perhaps a peacock.—For examples, see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 665.

[385] As in *Heji* 14360, I; see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 671; 679 (an abbreviated form, from Period V).

[386] Yao Xiaosui, "Jiagu keci shoulie kao," 51.

[387] See Hayashi Minao, *In-Shû jidai seidôki monyô no kenkyû*, Vol. 1, 120–25, 157–58; Vol. 2, 102–103. Bronze tapirs have occasionally been wrongly identified as elephants (an example is found in Watson 1977, fig. 308). Also, Anyang yielded confirmed, if insufficiently unprovenienced, tapir skeletal remains (see 2.3.2).

[388] *Heji* 37478, V mention 3; 37372, V and 37367, V mention 2; 37513, V has 1, listed with 148 "birds;" *Yingguo suo cang jiagu ji* 2539, V and 2542, V (quoted in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 815, 632) also has only 1, the latter listed along with 250 "birds" and 2 "pheasants." Similar records from Period I do not include elephants.

[389] On elephants see also above, 2.2.3, etc. and Fig. 1, p. 48.

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tamed or domesticated, or that it was sent in as tribute or gifts) remain open, and may all be true.[390]

* *qiang* [; modern 羌]: *qiang* people; barbarians; people of the Qiang area.
This category of prey should be added here, along with the other prey. It is the only category of people found as objects of the hunt. They are mentioned as the object of *tian*, *she*, and most frequently simply as either hoped to be or actually "captured," in various places in the same manner as wild game, and also as brought to the Shang center. They are also the only people among the various kinds of non-Shang outsiders (including other *fang* polities) to be mentioned as brought in and used in sacrifice there.[391] This will be further discussed in the conclusions.

There are several more obscure graphs and variations of graphs that clearly indicate animals captured in hunting, but which have not yet been deciphered (that is, correlated with later characters for animals, or their presence in the archaeological record).[392]

One striking but hard-to-explain feature of the verifications is that the attribute "white" is given, in a small number of cases, to a range of prey animals: including boars, foxes (?), deer, and the famous "white *si*" of *Heji* 37398, V); to horses delivered in tribute, and in two cases to "white people" offered in sacrifice.[393] Other colors are also sometimes mentioned.

Finally, there is the important issue of the listed order of the captured prey in verifications, and other patterns there. A preliminary investigation indicates that even if there are exceptions, the elaphure, the tiger and other deer (in this order) are privileged on the verification "lists" of prey. Foxes and wild cattle (*si*) sometimes upset this order.

Deer with antlers are invariably listed before antlerless deer. The reason for the prevalence of the deer and the tiger could simply be that deer (unlike foxes, etc.) were numerous and are also easily spotted, and their position at the top of the list might well reflect a status as a paradigmatic wild animal and object of hunting.[394]

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[390] Another later graph, *yu* 豫, glossed as "large elephant" in the Han dynasty dictionary *Shuowen jiezi*, also is used today as a shorter name for Henan province. Xu Zhongshu ("Yin ren fu xiang ji xiang zhi nan qian," 63 ff.) read the composite character as a merger of two, with the original meaning "Elephant dwelling (or city)," hence the name for the Henan province—ancient home of the Shang. This may be plausible, in the light of Mencius' description of the Zhou chasing the elephants away from the former Shang territory; but it remains impossible to substantiate.

[391] The *qiang* inscriptions are listed in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 41 ff. For discussion of their use in sacrifice see for example, Keightley, *The Ancestral Landscape*, 106–107, also 68, 74 n. 51; on the ritual procedure in which they are brought into the center (for the sacrifice), see p. 77. Hu Houxuan has calculated that 7,426 such *qiang* victims were mentioned in divinatory inscriptions (that is, in the inscriptions available up until the mid–70s), cited in Keightley, "The Shang: China's first historical dynasty," 267. Most frequently, they are mentioned as ancestor-offerings where ten at a time are used, the highest number mentioned is 400. They correspond to the lowest-status, mass-mutilated victims seen in the excavations (2.2.3).

[392] For five such examples, see Yao Xiaosui, "Jiagu keci shoulie kao," 52 (#9); 53–54.

[393] Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 382–83.

[394] Compare the observation by Wendy Doniger (*Other People's Myths*, 82–83) on the identification in the Indian traditions, such as in the *Rig veda*, of the deer as the paradigmatic wild animal suitable for hunting, known as the *mriga*.

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The tiger's position might reflect both its obvious high symbolic value (compare emperor Hadrian, cited at the outset!), and by its comparative rarity (just as the tiger, located at the top of the food chain, is relatively rare even where it maintains a strong natural presence). This is on the assumption that these tigers were indeed encountered in the wild and not kept or bred for the purpose of royal killings, as in the later empires (see below, Part 4).

3.2.4 Who hunted? The king and other participants and helpers.

As has been mentioned above, the king himself is the hunter *par excellence* in the inscriptions. Of course, the oracle bone inscriptions are essentially a royal record, so whatever other hunting that may have taken place simultaneously by the common people or by others unrelated to the king's affairs, is not reflected in this record. And as noted above, several hunting methods certainly imply that the king enlisted the aid of many people in the hunt (an observation which is also important for the interpretation of the importance of the hunt). Such helpers may have had different status, ranging from commoners, or common foot soldiers driving animals in the wild, to officials, and "guests."

The human chains formed when animals were driven or encircled may have consisted of the *ci*(?) *ren* 人 ("spear men"[?]) and the *geren* 戈人 ("dagger-axe men"), probably foot soldiers armed with spears and dagger-axes, respectively.[395] The dagger-axe is the most common bronze weapon in the archaeological record—in fact, in the late Shang period weaponry, it becomes the most prominent category of bronze artifact (along with ritual vessels), as part of a long-standing trend.[396] But there seem to be no explicit record of these or other soldiers taking part in any activity that leads to the capture of animals. They are, on the other hand, explicitly mentioned as participating in *she* [涉] (*Heji* 33230) and *bu* [步] (*Heji* 8399, 39868), other activities sometimes related to hunting; and occasionally the "dagger-axe-men" are called on to *she* 射, using bow and arrow (but there is no mention of any captured animals, except in a few possible cases where *ge* appears as used for the name of a person, not as the term *geren* [*Heji* 10713, 33378]).

The "foot soldiers" of the hunt are only occasionally referred to in the divinations, and then as *ren* 人, men or people, who are led by others:

> "Let it be Bing who takes [*ren* =] people to hunt." (*Heji* 32270, IV).
>
> On *yichou* [day 2], divining: "Let it be Ya who captures, [by?] taking [*ren* =] people to hunt." (*Tunnan* 961, IV)[397].

[395] For more examples of *geren* and *ciren* and a discussion of their identity, see Liu Zhao, "Buci suojian Yindai de junshi huodong," 90–91.

[396] Liu Zhao, "Buci suojian Yindai de junshi huodong," 90; see too Chen Fang-mei, "Some thoughts on the dating of Late Shang bronze weaponry."

[397] Yao Xiaosui ("Jiagu keci shoulie kao," 55) believes that *ren* was only a general term for people, which did not imply any social status. But it does seem that in the examples given here, the *ren* were subordinate to the chief hunters. The Ya was a high office; see Yao Xiaosui, "Jiagu keci shoulie kao," 56; Chen Mengjia, *Yinxu buci zongshu*, 510–11.

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The king is not mentioned is these cases, but in using what probably were other types of soldiers, such as the "Tiger-troops" (in *Heji* 27915, III; see above, 3.2.2) and "the Guardians" (*xu*, or *shu* 戍), he was directly involved:

> "[If] the king lets it be the Guardians [that he] takes to net [deer?], [he] will capture." (*Heji* 27968, III).
>
> Crack on *gengwu* [day 7]. Divining: "[The next *xin*-day =] Tomorrow [day 8] the king will hunt and Ma ['Horse', the Cavalry-Officer] takes the lead, there will be capture, [and] no rain." (*Heji* 27948, III).

The king's enlisting or utilization of military officials or soldiers (so identified because they are also recorded as participating actors in war divinations) indeed does suggest a link between hunting and warfare, but not a very conspicuous one. The "military personnel" was put to use in the king's hunt, but there really is no direct evidence in the inscriptions that the hunt was carried out exclusively by them or as a form of military exercise (see 4.4).[398]

Officials such as the "Dog-Keepers," the Quan, may have been named after the duty of looking after hunting dogs, and seem to have been charged with organizing the practical matters of the royal hunts.[399] They are sometimes mentioned as "reporting" (*gao* 告; to the king) the presence of animals at a locality,[400] and as indicated in several examples,[401] such as:

> Crack on *wuchen* [day 5]. "Dog-Keeper Zhong of Qin [Jin?] reports elaphure, [if] the king shoots [them with his arrows], [there will be] no misfortune." [There was] capture[402].

In two instances from Period I, the Duoquan 多犬 (The [keepers of] Many Dogs?)

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[398] Chao Lin, *The Socio-Political System of the Shang Dynasty* (Taipei: Academia Sinica, 1982), 60 regards it as a proven fact that the Shang, just as later Chinese dynasties, hunted to train their soldiers. But he does not show much evidence. Referring to a few inscriptions indicating the use of military personnel, he quotes only one (*Heji* 36426, V) to show that the hunts were a military exercise (all the examples are quoted from Li Xueqin (*Yindai dili jianlun*, 7). But this reading depends on taking *ge* as "hunt," which is not wholly convincing (see 3.2.2). In addition, neither this nor any of the related inscriptions mention any "capture" or any "captured prey." See too Chen Mengjia, *Yinxu buci zongshu*, 514; Keightley, *The Ancestral Landscape*, 108–109.

[399] Chen Mengjia, *Yinxu buci zongshu*, 514; Yang Shengnan, "Yinqi buci 'tian' zi shuo," 13; Wang Yuxin et al., *Jiaguxue yibai nian*, 458.

[400] The word *gao* is used much more often in different contexts: for "reporting" to ancestors," presumably associated with prayers to the ancestor spirits, or reports of captures (*zhi* xx) of enemies to them (in a way similar to that which occurs in Western Zhou bronze inscriptions, notably the Xiao Yu *ding*; M. Fiskesjö, "Celebrations of military victories in the Western Zhou period," Ms., 1992). There are also "reports" to the He, or River, perhaps a form of sacrificial ritual, etc. (examples at Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 247 ff.; Keightley, *The Ancestral Landscape*). Also, it is used in the terse, enigmatic statements which sometimes follow after the inscriptions: "two reports," etc. These may be related to how the divinations were addressed to the ancestors. Here, the word appears to have the more directly practical meaning of reporting the existence of game so that it may be hunted by the king or so that he could issue orders for it to be hunted, similar to the examples of enemy attacks on "our fields," "reported" in *Heji* 6057A and B (already cited above).

[401] Yao Xiaosui, *Yinxu jiagu keci leicuan*, 251.

[402] *Heji* 27902, III (quoted in Qiu Xigui, "Jiagu buci zhong suojian de 'tian' 'mu' 'wei'...," 3, as *Cuibian* 935). In *Heji* 27901, III, foxes are reported from the same place.

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themselves actively hunt, using nets or traps. This suggests that while the hunting dogs may have given them their name, they may not always have used dogs:[403]

> Crack on *renxu* [day 59]. Que divining: "[We will] call on the Duoquan to net [*wang*] deer at X." Eight month (*Heji* 10976A, Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 606).
>
> Crack on *yimao* [day 52]. Divining: "On the next *xin*-day ... [if] the Duoquan [will] 'net' ... " (*Heji* 10976A, Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 606).

The nature of the several "offices" engaged in similar duties remains rather unclear. Apart from the Quan and Duoquan, they include the "Duozi," the "Ya" (mentioned above), and "Duoya." There are only a few other examples of anyone other than the Quan "reporting" game to the king. These appear not to be Shang-office-holders but people of a landed aristocrat type, *zu* 族, probably blood relations of the king residing in places other than the royal center. Such examples include *Heji* 37392, V; and 37439, V:

> "Crack on *wuxu* [day 35]. Divining at X. If Y reports Z [an unknown graph composed of a deer and a component that could mean 'seeing' or 'spotting'] deer, the king will accompany [i.e. join Y] in shooting. Going and coming [there will] be no misfortune. The king ... Yong [?] ... " (*Heji* 37439, V; Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 254).

This category of higher-status people is sometimes called upon by the king (sometimes this is only assumed, since he is not mentioned—the subject of an action is often left out in the oracle bone inscriptions, as in both Classical and modern Chinese) to go out and hunt. The king had such people accompany him as guests, or hunting companions, more than as practical assistants. When such people are mentioned in the oracle bone inscriptions, their names are the same as the name of their residence. An example of this is the representative of the clan Que (Sparrow). In the reign of Wu Ding, the king frequently divined about the king's well-being, and he was also asked to go out hunting.[404]

Because the names of diviners and of Shang allies (who sometimes provided turtle shells in tribute) in some cases coincide, it has been suggested that the diviners also acted as hunters or warriors, but there is no secure evidence that not just

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[403] I take these *quan* to be people, and not dogs. Some scholars have found evidence for hunting dogs in the oracle bone inscriptions, but none of the quoted inscriptions seem to confirm it. Chao Lin (*The Socio-Political System of the Shang Dynasty*, 85) quoted several inscriptions as if they referred to hunting dogs, but these are "Dog-keepers." In one inscription (*Yinqi yicun* 5329B), Chao's interpretation rests on the character *qu* only, interpreted as "to bring [dogs]; the character has been much debated and may here refer to the Dog-Keeper, not dogs. It also seems to be used as a personal name (cf. Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 233, quoting *Heji* 5756–5759, etc.). In our present case, it may have been such a name.—Similarly, I disagree with Yao Xiaosui's view ("Jiagu keci shoulie kao,"55) that captured *qiang* prisoners were employed as hunters (based on examples where Duoqiang, the "Many *qiang*," are ordered to go out and hunt). Yao does not explain why it could not be that this official simply carried this name, Duoqiang (perhaps thus named on the basis of having killed many of the *qiang*), just as it cannot be said that someone called Xiang must himself have been an elephant (*xiang*)...

[404] K.C. Chang, *Shang Civilization*, 193–94, citing Zhang Bingquan, who identified 173 place-names with names of *zu*.

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the names but the actual persons were identical. (Such diviners may well have been "foreigners" serving at the Shang court).

The verbs used for royal hunting with company, are either *bi* or *cong* ("follow; join; go or come along [with]") where the graphs are composed of two people, suggesting the concept of togetherness or joint action; or more commanding: *hu* 乎, "ask; call on," and *ling*, "order; command." These words are all also used for many other actions, such as warfare. The latter words of command are also used when asking the king's own people to serve in hunting.

When *hu* is related to hunting the divination often concerns enlisting some practical aid, perhaps in cases where the king hunts with many people and thus conceivably has to "call on" or "order out" the populace *en masse*, for example as drivers of game such as deer.[405] However, there are not many inscriptions that call on others to hunt, and when there is there is not always any specification about just who is asked to take action.[406]

The terms *bi* and *cong* seem more closely related to the king's high-status hunting companions, but they are also not restricted to it, indicating that the king may have sought the prerogative to select companions at will. Examples of *bi* include mention of the king himself "joining" others in the hunt, even (his own?) "Dog-keeper" (*quan*) of a certain locality when the latter has "reported" available game and the king *bi* by hunting, i.e. "goes with (the Dog-keeper)."[407]

The term *cong*, on the other hand, is used both in its later sense of "[coming] from"[408] and in a sense of "accompanying" akin to *bi* (it is also graphically very close):

> "If [we] accompany the Dog-keeper of Kou, [we] will have capture of foxes."
> Indeed, [we] captured. "This was used."[409]

The Shang king's allying himself with various temporary companions in hunting alongside him (or, inviting them to share the hunting with him, from his point of view) is a highly interesting topic. Chao Lin provides a useful tabulation of such companions, but it only includes what are most likely either nobles or officials. Local lords are not included.[410] In the great majority of the hunting inscriptions, however, the king alone is the main actor, and it does not seem that there are any drastic changes over time in the frequency of the king's asking someone else to accompany him, or assist him, in the hunt.

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405 A few such inscriptions, all from Period I, concern *tian*: 9 examples at Yao Xiaosui, *Yinxu jiagu keci leicuan*, 802; also, see *Tunnan* 641, III (where the king apparently asks Xi, an ally, to help him "send forward" or" make appear" [*xing*] the elaphure deer which are then "captured").

406 See, for example *Heji* 1772, I (where it is proposed that hares be "driven" or pursued); and several of the *hu tian* inscriptions quoted above (Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 802). There are only several examples of where someone is *ling* ("commanded") to hunt (i.e., *tian*). For example: *Heji* 33209, IV; 33526, IV), and there is no report included on captured animals.

407 *Heji* 27920, III; 27921, III.

408 For example, *Heji* 28399, III where the king approaches the game "from the east"; *Tunnan* 1094, III-IV; and few other *Tunnan* inscriptions: see Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 56.

409 *Heji* 28316, III; several more examples of *cong* in this sense can be found at Yao Xiaosui et al., *Yinxu jiagu keci leicuan*, 60.

410 Chao Lin, *The Socio-Political System of the Shang Dynasty*, 7–8. The identity of companions and the places where such joint hunts were carried out would certainly merit more systematic research.

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An additional, very interesting question is if women like the high-status Fu (royal ladies, consorts or queens)[411] also participated in hunting.[412] Divinations concerning theirs affairs, or in which they are mentioned, can concern sacrifices they make, their childbirth, personal health, etc. Queen Fu Hao, whose tomb has been identified (2.2.2.3), is mentioned as involved in warfare at various levels: In *Heji* 2631, I, this lady is the one who calls on another person to launch a war; in *Heji* 176, I, she is directly involved:

> "Divining: 'Call on Fu Hao to shackle [war prisoners] . . .'"

In *Heji* 6480, I, the king orders Fu Hao to accompany a lord [*hou*] [in] "reporting" the attack on an enemy.[413] Fu Jing, another royal consort, is explicitly asked (*hu* 乎) to make war (on the Longfang 龍方, or land of the Dragons [*Heji* 6585A]), and is also divined for in hunting terms:

> "[If] Fu Jing hunts [*tian*], [she will] capture".[414]

This is but one single example, but it does indicate that while the king was the hunter-in-chief, even his queens might be included among the various subjects and relatives that took part in hunting expeditions, or were called on to help.

3.2.5 Where and when? Timing and location of the hunt

Several scholars have taken an interest in hunting inscriptions mainly out of consideration for their potential usefulness in the study of the geography or sphere of influence of the Shang state (that is, largely divorced from the issue of the nature of the

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411 On these *fu*, see Wang Yuxin et al., *Jiaguxue yibai nian*, 447 ff.; incl. three examples of a *fu* making war (*Heji* 6412, 6480, and 6584).

412 In most known hunter-gatherer societies and indeed among most hunters, women either do not take part or are bound by restrictions that often separate the blood shed in war or hunting from that of menstruation or child-bearing. When women do hunt, they may be prohibited from using certain techniques, such as spears or arrows. See, for example, C. Lévi-Strauss, *The Savage Mind* (Chicago: University of Chicago Press, 1969), 51–53; Valerio Valeri, *The Forest of Taboos: Morality, Hunting, and Identity among the Huaulu of the Moluccas* (Madison: University of Wisconsin Press, 1999), and "Wild victims: hunting as sacrifice and sacrifice as hunting in Huaulu," in *Fragments from Forests and Libraries: A Collection of Essays* (Durham: Carolina Academic Press, 2001), 249–88; and on women and hunting in general also A. Testart, "Essai sur les fondements de la division sexuelle du travail chez les chasseurs-cueilleurs," *Cahiers de l'Homme* 25 (1986); R.L. Kelly, "Hunting and menstrual taboos," *Human Evolution* 1.5 (1986), 475–76]; Agnes Estioko-Griffin et al., "Woman the Hunter: The Agta," in F. Dahlberg, ed. *Woman the Gatherer* (New Haven: Yale University Press, 1981), 121–51. For another exceptional example of women hunters, leading with hounds in Bronze Age Greece wild boar hunting, see K.F. Vickery, *Food in Ancient Greece* (Urbana: University of Illinois, 1936), 81.

413 Yao Xiaosui's interpretation of this inscription (Yao Xiaosui, "Jiagu keci shoulie kao," 59), that the king joined Fu Hao in "trapping" after the two had fought two separate fronts, seems forced. The term *she* is also mentioned in connection with "trapping," but since no captured animals are mentioned, it could be that the graph used (showing a *lu* deer caught in a pit) does not imply the capture of animals, but of enemy prisoners.

414 *Jiabian* 3001 (cited by Chen Mengjia, *Yinxu buci zongshu*, 539, but not included in Yao Xiaosui et al., *Yinxu jiagu keci leicuan*). A similar inscription, with a preface and a diviner's name, is cited in Zhong Bosheng, "Buci zhong suojian Yindai junli zhi er—Yindai de zhanzheng li," *Zhongguo wenzi* 17 (1993), 18, as no. 277 in the collection *Kyôto Daigaku jimbun kagaku kenkyûjo zô kôkotsu moji* (Kyôto, 1959), and yet another, with a place-name added but without any note of "capture," by Meng Shikai, "Yin-Shang shidai tianshou huodong de xingzhi yu zuoyong," 98.

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royal hunts as "hunting" *per se*).[415] The many place-names[416] contained in the inscriptions on royal journeys made to hunt, to make war or for other purposes have been used to reconstruct the geography of the Shang state with the help of additional information (such as on the dates of divination, seen as indications of "departures" and "arrivals"). Briefly, the discussions have produced two widely divergent views: one sees the Shang king covering very long distances over much of north China and thus with far-reaching and direct influence; another sees the covered area as more restricted. The discussion then concerns where it was located.[417] The arguments are complicated, and will not be discussed in detail here.[418] There are disagreements over the methodology utilized to address these issues: Hsü Chin-hsiung indicates the weak points in the general assumptions made by, for example, Matsumaru on the utility of the inscriptions for such purposes. Hsü convincingly argued that the mention of a number of hunting locations in a series of inscriptions cannot automatically be taken as an itinerary implying definite distances between "stops" on a journey, but probably only represents proposed possible destinations for the hunting expeditions (launched from some place to which the king might have returned in between the divinations, and expeditions), and they thus cannot be used with confidence for the construction of itineraries.[419]

Still, an argument for a loosely defined, permeable sphere of action, and limited direct influence, would seem well founded. Of course, the ability to import whale bones and other exotic items to Anyang already indicates that the issue of "influence" cannot be disentangled from that of long-distance exchange. But apart from those complications, it should be noted that even if the Shang king indeed only covered a relatively limited area in his journeys (campaigns of war, or hunts), the Shang king as seen in the inscriptions is a very frequent traveler. David Keightley has written on the king's incessant mobility, and the apparent lack of a need (or inability, I would suggest) for him to remain at an administrative center.[420] The center had a very important role, including for rituals addressed to the ancestors,[421] but this role was combined with a pressing itinerary casting the king as a "traveling" hunter (or warrior). Indeed, there is even an etymological relation between the word *wang* for "king" and *wang* for "travel, to go"; in Keightley's terms, the king was "'the one who goes' in the sense that

[415] Li Xueqin, *Yindai dili jianlun*; Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," and Zhong Bosheng, "Buci zhong suo jian Yin wang tianyou diming kao" (the latter draws heavily on Shima Kunio, *Inkyo bokuji sôrui*, 1959).

[416] The number of place-names identified in the inscriptions was listed as over one hundred and fifty, by Chen Mengjia (*Yinxu buci zongshu*, 249–312); 239 by Zhong Bosheng ("Buci zhong suo jian Yin wang tianyou diming kao," Appendix); or as over 500 in all (see Keightley, *The Ancestral Landscape*, 55); eighty-seven of these have been found in hunting inscriptions (Huang Ranwei ("Yin wang tian lie kao," pt. II, III). Huang noted 59 possible additional hunting locations, where the interpretation was unclear (mainly singular occurrences). This may also be an additional indication that hunting, in the earliest period, was more of an *ad hoc* affair.

[417] One scholar believed it did not extend further than the immediate vicinity of the capital center (Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," 127–41 etc.).

[418] For a summary in English, see K.C. Chang, *Shang Civilization*, 214–15, who takes the intermediate view that the hunting grounds were probably widely distributed, but concentrated in the Qinyang area in central-western Henan. This is where both Chen Mengjia (*Yinxu buci zongshu*, 262) and Li Xueqin (*Yindai dili jianlun*) have suggested that they were concentrated. See too Wang Yuxin, *Jiaguxue yibai nian*, 509–11; Keightley, *The Ancestral Landscape*, 108 n. 35 and the references therein.

[419] Hsü, Chin-hsiung, *The Menzies Collection of Shang Oracle Bones*, xxxv.

[420] Keightley, "The late Shang state: When, where, and what?," 552–54.

[421] See above (2.1).

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he was continually traveling to various areas of his domain,"[422] and the question why the king's frequent "travels," i.e. warfare, inspections, and hunting expeditions were required really becomes one aspect of asking why the hunts were conducted.

There are examples of a specification of the direction of the hunt by the directions "east" and "west," offered as complementary alternatives in *Heji* 22043, I:

> Crack on *dingwei* [day 44]. "[We] will hunt in the west"; and [Crack] on [*ding-*] *wei* [day 44]. "[We] will hunt in the east."[423]

This "cosmological" choice seems quite different from the more technically oriented directives in the inscription calling for "driving" from the "east, west, and north ... " used with *zhu*, to pursue, in *Heji* 28789, III (above, 3.2.2).

The characteristics of the natural environment in which the hunts took place is actually seldom mentioned. Many place-names do have a "water" component, and it can be assumed that they were either names of bodies of water, or of places located by marshes, lakes or streams. "Forests" don't seem to be explicitly mentioned as a location of hunts, perhaps because there was forest almost everywhere. In some cases, the specification *luan* is given, meaning "on the slopes of" (some mountain).

In contrast to the spatial specifications on the location of the hunt, the temporal preference does not seem to have been divined for. Again, this may be because the seasonality was obvious for the actors involved. The main evidence for temporal distribution is the month notation, which is not always given. But the distribution of these notations ranges over all the twelve months of the Shang year.[424] It remains to be investigated whether any such seasonal preference (either for hunting in general or for specific methods) perhaps existed in (or declined, was altered, etc.) in specific periods of time.

The choice of date for the hunt within the Shang sixty-day cycle of six ten-day weeks, on the other hand, was much more important (just as it was for other activities, like ancestral sacrifices). Matsumaru Michio counted the frequencies of divinations for hunts carried out under the general headings of *tian* and *ge*, and concluded that dates for *tian* were not regulated in the first period, but became limited to the second, fifth, and eigth day (*yi*, *wu* and *xin*) of the Shang ten-day week in Period II. In Period III, the ninth day (*ren*) was added. Period IV saw no change, but in period V the fourth day (*ding*) was added[425].

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[422] Keightley, "The late Shang state: When, where, and what?," 553.

[423] Based on a translation made by David N. Keightley. Huang Ranwei ("Yin wang tian lie kao," 66A-B) lists a series of similar examples.

[424] Meng Shikai, "Yin-Shang shidai tianshou huodong," 100; Hsü (*The Menzies Collection*, xxxiv) says this is curious—presumably because some later (Zhou or Han period) texts, such as the *Liji* 禮記, include prescriptions designed to avoid the spring and summer breeding season ("Zhoushu 周書 / Wen chuan 文傳," sect. 6; the *Xunzi* 荀子, "Wang zhi 王制" ["Royal regulations"] chapter; and the "Wang zhi 王制" chapter [identical name] in the *Liji* (Legge 1885, trans.: sect. II, #25]). But other texts indicate that hunting took place in all seasons during the Zhou (*Zuozhuan*, Duke Yin year 5; enumerating the different words used in that period's language, for hunting during each of the four seasons; also, the *Liji* ["Xia guan 夏官" section, ch. "Da sima 大司馬"] which mentions hunting (*tian* 田) all year round [quoted in Meng Shikai, op. cit., 102]).

[425] Matsumaru Michio "Yinkyo bokujichû no denryôchi ni tsuite," 43, 70; Hsü Chin-hsiung, *The Menzies Collection of Shang Oracle Bones*, xxxiii.—The *wu*-day may have been the most common in Period V, followed by *xin* and *ren* (Keightley, personal communication; the sample in this case included only inscriptions formulated as "*wang tian* 王田" ("the king hunts...").

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Hunts were sometimes conducted in connection with military battles, as can be seen both from how they were carried out at the very places that had been mentioned as battlefields,[426] and from the way in which they took place in immediate temporal connection with the hunts. One such example is found on one already mentioned inscribed deer skull from Xiaotun, where, it seems, the hunt took place immediately after the war:

> On *wuxu* [day 35] the king hunted [tian] at X. [It was at the time of the] *sheng* [sacrificial ritual?] for Wenwuding 文武丁... [It was when] the king came from making war on [*zheng* 征] [the Renfang].[427]

This is a non-divinatory inscription recording a hunt, presumably commemorating it, by using the trophy obtained in that hunt as its medium.[428] This trophy-recording and gift-giving immediately after a successful hunt or war is reminiscent of real and imagined Western Zhou events (such as the massive "hunting" expedition conducted by King Wu after the conquest of the Shang).[429] One recently discovered divination concerned precisely what would be the appropriate order, or timing:

> [A]. Crack on *xinyou* [day 58]. "Ding will first hunt [*shou*], then [have =] carry out an attack on [the enemy]." [Crack notation:] One. [B]. Crack on *xinyou* [day 58]. "Ding will first attack [the enemy], then hunt." [Crack notation:] One.[430]

However, there are actually few inscriptions that describe a direct relationship or temporal relationship between hunting and war in this manner, and the sequence of having the hunt follow a (successful) war is not consistently present. On the connection between war and hunting during the Shang period, see further below (4.4).

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[426] Matsumaru, in his study of the place-names connected with the hunt, also points to the coincidence of certain place-names as locations of both hunting and military endeavors suggested by the use of the word *shi* 師 (troops, encampment of troops) (Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," 145–46).

[427] *Jiabian* 3940, illustrated in Cheng, *Archaeology in China*, Vol 2, plate 24A; transcribed in Zhang Bingquan, *Jiaguxue yu jiaguwen* (Taipei: Guoli bianyiguan, 1988), 476; and as *Heji* 36534, V.—In the *Heji*, the word *tian* has been omitted by mistake from the inscription 36534, where it is clearly present. Another such bone trophy, not listed in the *Heji*, is on a mammal long bone with ornaments and a commemoration of a royal gift-giving after a hunting expedition. It is illustrated in Herrlee G. Creel, *The Birth of China* (New York: Reynal and Hitchcock, 1937), pl. 8—perhaps the editors overlooked it or rejected it as a fake, which it probably is not.

[428] The other two animal skulls' inscriptions (*Jiabian* 3941 [another deer skull], and 3939 = *Heji* 37398, V [wild cattle]) also have a similar structure, but appear to refer to a different occasion. The date notation is different and do not mention the king returning from that war episode.

[429] Thus for example, Zhong Bosheng (in his "Buci zhong suojian Yindai junli zhi er—Yindai de zhanzheng li," 139–40 on "Post-battle hunts") does not quote examples of post-battle hunts from oracle bone inscriptions, said to have been carried out by king Wu Wang *after* the demise of the Shang and described in different versions in the *Mencius* and in the *Yi Zhou shu*. In the latter, the victor first defeats human enemies and then hunts (*shou* 狩) and captures (*qin* 禽) large numbers of different wild animals, including tigers, deer, and wild boars (*Yi Zhou shu*, "Shi fu 釋俘," 6; Gu Jiegang, "*Yi Zhou Shu* 'Shifu pian' jiaozhu xieding yu pinglun," 14, 23, 28; Shaughnessy "'New' Evidence of the Zhou Conquest," 59). In Mencius' toned-down version, no rivers of blood flowed from the battle, and the Zhou and "hunt", but instead merely "chased away" the wild animal (*Mengzi* 6.9, 155). On these types of hunts see too M. Fiskesjö, "Celebrations of military victories in the Western Zhou period" (ms.); and Yang Kuan, *Gu shi xin tan*.

[430] Anyang work team, "1991 nian Huayuanzhuang dongdi, nandi fajue jianbao," *Kaogu* 1993.6, 496; inscriptions H3 484 A-B.

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The implications of these developments and of all the data so far will be discussed in the conclusions (Part 5). But first, Part 4 introduces some important elements in the interpretations of the Shang royal hunt that have been proposed.

4. Some important earlier interpretations of the Shang royal hunt

4.1 The hunt as a luxury sport or leisure activity

The view that the hunting expedition of the Shang kings mainly was a luxury sport has been very persistent. First, as the traditional, even Classical, Chinese interpretation inherited from Zhou times, assigning decadence to the late Shang kings in order to justify the Zhou conquest. Second, it reappears in many modern studies, ultimately because they build on the incorrect assumption that the hunting was done as the king's *leisure* or pastime. Many, perhaps most, influential Chinese and Japanese scholars in the past have opted for this type of explanation.[431] K.C. Chang's 1980 synthesis of Shang archaeology refers to the royal hunt as "more of a sport than a subsistence activity"[432] as if these were mutually exclusive, or even the only choices. This economistic mode of thinking is evident in the works of many scholars. Similarly, Li Ji for his part, held that the comparatively larger size of Shang pottery indicated how Shang agriculture had become more "advanced," and therefore, (sic) "the game huntings mentioned in the ancient inscriptions were evidently pursued for pleasure and excitement rather than for economic necessities as occurred in the late Paleolithic period... these pleasure-seeking activities were evidently confined to the royalties and the aristocratic class..."[433] On one level, this explanation can be understood as an attempt to reconcile Western evolutionist theories with the traditional Confucian explanation of the hunt. In the same vein, mainland scholars writing under the influence of Chinese Marxism also often start from the assumption that since the Shang was "advanced" in terms of social and technological evolution—i.e. agriculture was well developed—hunting and gathering, by definition, ought to have been left behind since it represents an early stage (this is the case both with Classical Chinese "evolutionism" and modern-day evolutionism inspired by 19th-century European theories).

Actually, at present we cannot know for sure that it was only the king and the aristocracy members of who spent time hunting, or that it was exclusively a royal or aristocratic activity. Commoners may also have hunted, only they were not recorded in inscriptions. The only way of addressing this problem would be to study status differentiation in animal remains from different habitation

[431] Matsumaru Michio, "Yinkyo bokujichû no denryôchi ni tsuite," 141–42 (citing Guo Moruo 1945,p. 217–23); Huang Qingxin, *Yindai tianlie yanjiu*, 83–84 citing Guo Moruo 1933, p. 163 as well as Chen Mengjia (*Yinxu buci zongshu*, 552); Hu Houxuan ("Buci zhong suo jian zhi Yindai nongye," 2), and the Japanese scholars Kaizuka Shigeki and Shirakawa Shizuka. But Shirakawa came to suspect that there was more to the hunt (both cited in Matsumaru Michio, "Yinkyo bokujichû no denryôchi ni tsuite," 142, 143–44; see too Huang Qingxin, *Yindai tianlie yanjiu*, 85).

[432] K.C. Chang, *Shang Civilization*, 142—at the same time, he noted that the royal hunt is a frequent topic of divination and criticized Li Ji for "underestimating the economic and symbolic importance of these hunts" (p. 214), but did not elaborate. See below for further discussion.

[433] Li Ji, "Hunting records," 12.

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areas identified with different social strata, which has not been attempted in the Shang context.[434]

In the end this still begs the question why the king and others did engage in hunting to the extent that they evidently did. The influential idea that the hunt should be thought of as "sport," that is, luxurious, decadent leisure enjoyed by the kings (i.e. as a benefit of their position but unrelated to their proper role as kings; rather a neglect, on the part of decadent kings, of their proper business), as mentioned, has deep roots in traditional Chinese historiography and the traditional "Confucian" interpretation of the victory by the Zhou 周 over the last Shang king known as Zhòu 紂. Since early Zhou times, the kings of the last part of the Shang invariably have been condemned for being overly "at ease." According to this traditional view, the early leaders of the Zhou dynasty stressed that they for their part "dared not rest assured" about being able to keep "Heaven's mandate," and they repeatedly tried to justify the conquest of the Shang in terms of the decadence and evil on the part of the last Shang king.[435] The *locus classicus* of this line of argument is found in the early chapters of the *Shangshu* 尚書 (the *Book of Documents*).[436] These traditions were created as orthodoxy by later Confucians (the creation involved extracting the original description of the bloody conquest itself from from these early Zhou accounts; as mentioned in note 17, and 429xx), and especially since the Han dynasty onwards, they have had a long-lasting influence. This even explains why many modern Chinese scholars have taken for granted that the last Shang king as indulged in decadent leisure and luxury and neglected the affairs of government, and then extend this to serve as an explanation for the hunting expeditions. Guo Moruo, for example, at one point believed hunting was concentrated in the times of the next to last Shang king Di Yi 帝乙, during whose reign the Shang flourished, and where there would have been plenty of time for leisure activities, such as hunting.[437]

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[434] Li Ji's view may have something to do with the frequent use of dogs (perhaps hunting companions?) as offerings in Shang burials (as indicated above, dog offerings were more frequent in higher than in lower status burials but also do occur in low-status burials), or with the large difference in the amount of grave goods. Li concludes that the life of the Shang royals was very different from that of the farming masses.—Dogs were evidently prized possessions even in later times (ode no. 103, in the *Shijing* sings the praise of hounds with bells and rings, reminiscent of the bronze bells found with buried dogs in Anyang sites. For late Zhou examples see D. Eliasberg, "Pratiques funéraires animales en Chine ancienne et médiévale"). Lower-status people could of course also have hunted without dogs (or other high-status tools).

[435] See the introduction. The early Zhou rulers may indeed have been uncertain about the permanence of their power in the face of strong Shang traditions (since they were de facto usurpers of what they even themselves must have regarded as the more ancient, central, and superior position of the Shang). As is well known, they also had to face a post-conquest rebellion organized by Shang descendants.

[436] "[the decadent late Shang kings, from Zujia 祖甲 onwards], during their whole life enjoyed ease... and did not know of the hardships of [the grains =] farming and did not pay any attention to the efforts of the [little men =] people, they were bent on indulging in pleasures... [but the Zhou king] Wen Wang 文王 dared not amuse himself in excursions and hunts [here, *tian* 田], ... Oh the succeeding king, who will continue [the line] from now, [he] should not be excessive in wine and not licentious in excursions and hunting [*tian* 田]..." These are said to be the words of the Duke of Zhou 周公, regent for the young king Cheng 成. Ch. "Wu yi," 7–12, after Bernhard Karlgren, *The Book of Documents*, 57–58; also quoted by Hu Houxuan, "Buci zhong suo jian zhi Yin dai nongye," 10, and cited in Huang Qingxin, *Yindai tianlie yanjiu*, 84. Hu took this as proof that the hunts cannot be interpreted as a subsistence activity.—Similar, but more generally phrased admonishments are in the "Duofang" chapter, sect. 16 (Karlgren, *The Book of Documents*, 63–64); and the "Junshi," sect. 3 (op. cit., 59–60). Only parts of this text date back to the early Zhou period. See E. Shaughnessy, "*Shangshu*," in M. Loewe, ed., *Early Chinese Texts*, 376–89.

[437] Guo Moruo, *Buci tongcuan kaoshi*, 163, cited in Huang Qingxin, *Yindai tianlie yanjiu*, 83–84.

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But Guo Moruo is putting the chariot before the horse. He is right about the link between the hunting activity of kings and the fortunes of the state—however, hunting does not necessarily imply lazy leisure: the royal hunt itself was instrumental in bringing about prosperity and the flourishing of the state. Indeed, the many hunting inscriptions from the time of Wu Ding 武丁,[438] another busy earlier king under whom the Shang kingdom is also believed to have prospered—because of, not "despite," his preference for hunting. The suggestion that there was decadence and decline on the part of the late Shang kings in their indulging in the pleasures of hunting does not hold and should be exploded, just as the Zhou version of the conquest of the Shang dynasty has been exploded, already.[439]

At the same time, it is necessary to take seriously the view of the royal hunt as a form of "luxury" or "sport." The royal hunt could indeed be understood as a "sport,"[440] that is, one not irrelevant to Shang kingship. In the introduction, I mentioned Bataille's point of view regarding the uses of the useless, and on "consumption beyond utility." One aspect of this is that luxury, something perceived as extravagance, unnecessary or even as waste by members of a society but is nevertheless "consumed" as a privilege by those that have the means, can serve as an item of conspicuous consumption, intended to impress. The people who were supposed to be impressed may have been precisely those who were not allowed to hunt (or who did not have the means to do so in the exuberant fashion of the king). In his famous *Meditations on Hunting*, Ortega y Gasset speaks of the resentment among the common people with respect to the aristocratic hunting privileges of Europe.[441] Such resentment, envy, and awe may have existed in Shang China too.[442] Not least in this sense, the "luxurious waste" of hunting may have served as one way to both establish and reaffirm the privileged position of the king. But the privilege of conspicuous wastefulness is not the only one that can be considered in this context and does not fully express the use of "luxury" and "waste" that Bataille suggested. While there is no space to even begin to exhaust the relevance of Bataille's ideas here, I should like to refer to Paul Wheatley's discussion of Anyang as an example

[438] Such as most of the oracle bones from YH127, see above (2.2.1; also *Bingbian*, and Takashima Kenichi, *A Concordance to Fascicle Three of Inscriptions from the Yin Ruins* (Taipei: Institute of History and Philology, Academia Sinica, 1985).

[439] On this issue, see too the Introduction.

[440] It is worth considering that even when the players are not kings and the game does not consist of hunting in the wild, "sport" is still a complex phenomenon in itself—not the least in modern Western society, where as an "opium of the people" it obviously plays a role going far beyond the games themselves (witness the manifold social aspects of televised sporting events). The hunting "sport" of the contemporary West, is similarly invested with a host of meanings far beyond simple utilitarianist aspects of recreation of body or mind, or of the procurement of food. Fore more discussion of the role of "play," see the imaginative discussion by Johan Huizinga, *Homo Ludens: A Study of the Play Element in Culture* (Boston: Beacon press, 1950), and for in-depth studies of ritualized games in other ancient societies, see Scarborough and Wilcox, eds. *The Mesoamerican Ballgame* (Tucson: University of Arizona Press, 1991), on the famous Mesoamerican ballgame; and W.J. Raschke, ed. *The Archaeology of the Olympics: The Olympics and Other Festivals in Antiquity* (Madison: University of Wisconsin Press, 1987). But here we are concerned with the dimensions of a "sport" where a king is not in the audience but an active participant at the center of the "game" (see further 4.1.1).

[441] José Ortega y Gasset. *Meditations on Hunting* (New York: Charles Scribner's Sons, 1972), 32–34.

[442] An example can be found in the *Mencius* (2.2; Harvard/Yenching index 1B.2). The philosopher complains about the restricted access to a contemporary (3rd c. BCE) ruler's hunting park, comparing it to the early Zhou king Wen 文's park which he described as modest, and open to the common people, including woodcutters (this, of course, is probably Mencius' own invention). On such parks, see too below (5.6).

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of incipient Chinese urban centers. He refers to a related, Weberian interpretation of hunting in feudal society to explain "the aristocratic pastime of the [Shang dynasty] conventionalized hunt, which figured prominently in the oracle inscriptions." This type of pastime hunt or "game," distinguished in Wheatley's account from subsistence hunting, "served the several purposes of simulating military training, inculcating qualities of character, and providing an outlet of physical energy for the elite."[443] But this "pastime" was quite different from the traditional Chinese understanding mentioned earlier (i.e., in essence, a perceived neglect of the imperial duties within the state and in relation to the cosmos). Max Weber saw this type of hunt as a peculiar form of "training" related to the development personal military skills in the course of hunting as part of an "artistic" life-style of independent feudal lords—which really was "just as little a general 'pastime' as in organic life."[444] Feudal lords (such as, for example, in Europe and Japan) emphasized personal honor (and thus personal effort in war, as opposed to the industrial drill developed to discipline mass armies), and consequently latter also found themselves incompatible with the forces of "commercial rationality." Their hunting, closely related to the one cherished by Ortega y Gasset, did not primarily have direct-utilitarian functions, but formed part of a purposeful, aristocratic negation of such functions. It constituted the pursuit of a "luxury" which "in the sense of rejecting purposive-rational control of consumption is for the dominant feudal strata nothing superfluous: it is a means of social self-assertion."[445]

The "social self-assertion" is a conspicuous "privilege." But Max Weber also suggests another interesting aspect which is relevant in the Shang case: the pursuit of hunting as an expression of autonomy (as opposed to dependency, or heteronomy), engaged in by the aristocrat as aristocrat (non-commoner) rather than simply as a privileged individual. The aspect is inherent in the hunt in several ways, including in the element of personal risk-taking and killing other living beings, and also in the very mobility of the hunter. The element of risk-taking also is very important to this peculiar pursuit of "autonomy," so easily confused with "leisure."

However, as for Wheatley's use of Weber's model in the Shang case, it must be cautioned that Weber was characterizing independent feudal lords of medieval Europe and Japan as opposed to the "patriarchal patrimonialism" of a state centered on a "good king" ruling dependent subjects, a "Landesvater." He did not discuss the hunting activities of universalistic kings.[446] Because the Shang state as it appears to us in the inscriptions was a state heavily centered on the king,[447] it would perhaps have been more appropriate to apply such interpretations to the latter part of the

[443] Wheatley, *The Pivot of the Four Quarters*, 68, 102 n. 220.

[444] Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, Vol. III (New York: Bedminster Press, 1968): 1104–6.

[445] Max Weber, op. cit.; see also Reinhard Bendix, *Max Weber: An Intellectual Portrait* (Berkeley: University of California Press, 1977), 364–65; and Bataille, op. cit.

[446] As Bendix notes (op. cit., 360), although his two categories often are blurred in practice, Weber himself insisted on the analytic difference.

[447] Wheatley labels the Shang a "patrimonial" state in a Weberian sense (*The Pivot of the Four Quarters*, 52).—On the nature of the Shang state, and Shang kingship, see too Keightley, *The Ancestral Landscape*; on the fluctuating sphere of influence of the Shang see also Xia (Shaughnessy) 1987.

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Zhou dynasty when Zhou royal power was waning and increasingly independent lords (more akin, perhaps, to Weber's feudal lords) battled each other as usurpers.[448]

4.2 The hunt as a supplementary subsistence activity or "economic" factor

Chinese and other scholars in modern times who have wanted to improve on the Classical condemnation of Shang wastefulness as an explanation have also searched for direct-utilitarian or practical explanations of the hunt. These are ultimately inspired by Western industrialism's ideals of effectiveness and economy, used to justify its own departure from aristocratic tyranny. These "new" explanations, often presented in calculated terms, include economic reasoning based in industrialism's conceptions of supply and demand, such as the need to supply food for the Shang court, raw material for the workshops, or practical training for warfare. It is suggested, for example, that the Shang kings hunted to supplement their kitchen with the meat of wild game. This is, of course, entirely possible, but few if any scholars have contended that this could have been the sole motivation behind the organization of hunting expeditions and divination about their success. The evidently important role of agriculture and large-scale husbandry in Shang society, along with the simultaneous general acceptance of deterministic schemes of social evolution by both Marxists and non-Marxists, has precluded the adoption of such a simplistic conclusion.

The noted oracle-bone scholar Chen Mengjia rightly pointed out, against this "economistic" trend, that because of an abundant supply from agricultural and husbandry there would not actually have existed a real need for the Shang to supplement it with wild game: "...of course, the meat, fur, bones and horns of the prey animals were put to use in the royal house,... this was [also] one motivation behind the hunts" (his conclusion, however, tended to join with the one just rejected above: that the hunt must have been done purely for the sake of wasteful pleasure).[449] Chen and others were heavily influenced by later accounts, where practical use of hunted animals is made explicit. Indeed there are references in the literature of later periods (the Zhou, etc.) which suggest game meat may have been consumed by the elite and other animal parts used in various ways.[450]

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[448] On this period, see also Lewis 1990 – but note that in the single reference to the Shang, on page 21, it is concluded too hastily that hunting in the Shang period was a means to obtain meat for sacrifice and for ceremonial banquets.

[449] Chen Mengjia, *Yinxu buci zongshu*, 552; see also Huang Qingxin, *Yindai tianlie yanjiu*, 84.

[450] Such as, for example, the descriptions of Zhou hunts in the *Shijing* (ode 154: ("...we go for badgers, we catch those foxes and wild-cats; *we make furs for the young noblemen...*"); ode 179 ("...if the footmen and charioteers are not attentive, *the great kitchen will not be filled...*" and 180 ("We drew our bows, we grasped our arrows, we shot at that small boar, we killed this big wild cattle, in order *to serve up to our visitors and guests...*") (trans. based on B. Karlgren, *The Book of Odes* [Stockholm: Museum of Far Eastern Antiquities, 1974]). In the latter poem, there are also records of pre-hunt selection of auspicious days and sacrifices. The *Zuozhuan* mentions how the *shouren* 狩人—the official "Hunts-man"— of the lord of Jin has failed to "deliver fresh [meat]" because of the disruptions of an ongoing war (Lord Xuan, year 12.2; cf. Yang Bojun et al., *Chunqiu Zuozhuan cidian* [Peking: Zhonghua, 1985], 735–36). The *Zhouli* (or, Rites of Zhou) specified that the *shouren* should present the king with wolves in winter, elaphure (*mi* 麋) in summer, and other prey in the spring and the autumn, the meat delivered to the royal cook (This is not certain—the Zheng Xuan commentary says *la* means sacrifice made to the ancestors of animals caught in the hunt); and send fur, antlers, etc. to the royal workshops ("Tianguan 天官" section, "Shouren 狩人" chapter; Legge's ed. 1885: 5/24b; quoted by Meng Shikai, "Shangdai tianlie xingzhi chutan," in Hu Houxuan, ed., *Jiaguwen yu Yin-Shang shi*, vol. 1 (Shanghai: Shanghai guji/Sanlian, 1983), 205.

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But the Shang oracle bone inscriptions do not, as far as I understand, contain any information about the eating or other use of wild game (other than in sacrifice, and then only rarely and problematically so—see below, 4.1.3), whether it is meat, fur, bone or antlers of the prey animals that was consumed or otherwise used. (We should also allow for the possibility that the ideology governing what could and what could not be eaten did not promote the consumption of all available resources, however obvious to us[451]). In any case, surely domesticated animals must have dominated as a source of food, given their dominating presence in the archaeological remains. K.C. Chang stressed that wild animals could not compare with domesticated animals as a Shang food source (that is in terms of subsistence, not as symbolic supplement, a role which we can readily imagine that wild animals may have had at the Shang court).[452]

There is not much evidence to go on in the archaeological record for answers regarding these various aspects. We do not, for example, know where the royal kitchen was or where the refuse went. Of course, hunting and fishing at least must have originated to provide food[453] and the Xiaotun Locus North animal remains to some extent must be considered a royal *kjøkkenmødding*. But on the basis of the existing record, as discussed earlier (section 2.3), it is difficult if not impossible to adequately assess the dietary role of animals caught in the hunting expeditions conducted by members of the highest strata of Shang society, or the extent to which they were put to other "practical" uses in the royal household or other social strata.

We do know, on the other hand, that the king cared deeply about the harvest that fed the majority (and thus also indirectly himself). The harvest is, along with the hunt, a very prominent concern in Shang divination;[454] the intense interest that the king showed for the hunting expeditions also applied to agriculture. Data from other comparable early agricultural societies indicate that elites often have enjoyed a more varied diet than low-status people, but also consumed the products of agriculture. We know that one very famous series of oracle consultations concerned the "sick teeth" of King Wu Ding[455]—if we had been able to find Wu Ding's remains and examine his teeth, we would probably see that they too were affected by the dental caries that afflict all agriculturalists dependent on a diet rich in soft carbohydrates (including, then, Shang commoners and royals alike). One conclusion is that the future archaeology of Shang biological materials will tell us more. It should study the distribution of faunal remains within the parameters of the Xiaotun sites, evidence of butchery on skeletal remains, etc.,[456] and more human remains, which could

[451] In this regard, too, the eating habits of the masses of Shang commoners could have differed dramatically from that of the elite. On this topic, see Sahlins 1976: 168 ff. ("La Pensée Bourgeoise: Western Society as Culture").
[452] K.C. Chang, *Shang Civilization*, 230.
[453] As duly noted by Huang Qingxin (*Yindai tianlie yanjiu*), 5.
[454] See note 293, above.
[455] Keightley, *Sources of Shang History*, 85 n. 112; see *Heji* 13646, etc.
[456] On the methodology, see above (2.3).

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yield valuable information on the diet of Shang people of different status.[457]

As for animal bone and antlers as raw materials for tool-making and decorative carving, there is of course a certain amount of information to be gleaned from the archaeological record, including information on the rich bone- and antler-working sites—that have been found both at Anyang and at the earlier Zhengzhou Shang sites, but seldom detailed information on what animals were used.[458] Detailed studies of the skeletal material and tools from such sites, including the identity of the deer and other animals that provided raw materials, and the bone tools or ornaments themselves (so richly represented in the sumptuous large tombs and other Shang archaeological contexts), would be helpful. Clearly, much of the antlers used to supply the workshops with raw materials came from captured deer. But much of it may have been harvested by commoner hunters, or from semi-domesticate deer (or antlers delivered as gifts or in exchange from the outside). Whatever the case, the mere fact that the deer served as a direct-economic source of raw materials still cannot explain why it should be the king that goes out to shoot them. Even if there was a monopoly on hunted meat, and the Shang kings at least generally had easier access to meat than most low-status Shang people, this motive alone also cannot be regarded as a credible explanation of the obsession with hunting expeditions.

There is at least one other way of understanding the royal hunting expeditions as more directly "economically" useful: as a way of chasing off wild animals from agricultural fields, the *wei tian chu hai* (clearing fields of pests) sometimes referred to by modern scholars.[459] In concrete terms, wild buffalo, cattle, deer and even elephants can quite conceivably have intruded on farmed land, destroying the crops (as they do in our contemporary world when they come into conflict with encroachment on their territory). Tigers and other potentially dangerous animals could have been seen as "pests," to be eradicated. This is both possible and probable, but there is little evidence to go on except the presence of these various animals in the faunal record, passages in much later textual evidence quoted by Chinese scholars, and the intriguing connections between "fields" (*tian*), "burning" (*fen*) and hunting discussed above (3.2.2). Still, it is a viable complementary explanation that may actually hold deep interest.

[457] As mentioned, few high-status remains have, regrettably, been recovered so far, and very few excavated low-status skeletal remains have been preserved for re-study. There are clearly opportunities for the future. The archaeology of status-specific variation in diet and health is a rapidly expanding field of inquiry, largely unexplored in China. Chinese scholarship on human skeletal remains has often been limited to craniometric studies of genetic differences (Zhongguo shehui kexueyuan, *Anyang Yinxu tougu yanjiu* [Peking: Wenwu, 1985]; and limited studies of dental pathologies [op. cit., 119–31]). For recent scholarship on health and status in archaeology, see for example Gilbert and Mielke, eds., *The Analysis of Prehistoric Diets* (Orlando: Academic Press, 1985); H. Bush et al., *Health in Past Societies: Biocultural Interpretation of Human Skeletal Remains in Archaeological Contexts* (Oxford: Tempvs Reparatvm, 1991). This research has an ancestor in the classic paper on health and social difference by J.L. Angel, "Health as a crucial factor in the changes from hunting to developed farming in the Eastern Mediterranean," in M.N. Cohen et al., *Paleopathology at the Origins of Agriculture* (Orlando: Academic Press, 1984, 51–73. See too Lori Ellen Wright, *The Sacrifice of the Earth?: Diet, Health, and Inequality in the Pasion Maya Lowlands* (Ph.D. thesis, University of Chicago, 1994, incl. ch. 4: "Social Status and Heterogeneity in Diet and Health," citing dramatic status-differences in diet from pre-colonial Pacific islands and the Americas where ruling lords were provided with wild game by agricultural subjects. On dental pathology in the archaeology of early agriculturalists, see, for example, M.L. Powell, "The analysis of dental wear and caries for dietary reconstruction," in Gilbert and Mielke, eds., *The Analysis of Prehistoric Diets*, 307–38.

[458] See note 59, above.

[459] For example, Meng Shikai, "Shangdai tianlie xingzhi chutan;" "Yin-Shang shidai tianshou huodong."

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4.3 The hunt as a means of providing sacrificial victims

In an imaginative article published in 1949, Chen Pan argued that the royal hunt was primarily conducted to provide sacrificial victims. This view, of great interest, is sometimes reiterated by other scholars as well, but the cited sources are mostly later than the Shang (usually from the late Zhou and Han periods). Chen Pan cited the way in which how the Zhou king would celebrate successful hunts with feasts preceded by a sacrifice [to the ancestors], and held that Shang kings, too, always conducted a hunt prior to sacrifices to the ancestors, and in effect hunted for sacrifice.[460]

But there is no conclusive evidence for this in the Shang data, either in the archaeological record, or in the oracle inscriptions. As already mentioned, and as will be discussed further in the conclusions, both of these sources suggest an overwhelming, almost exclusive preponderance towards making domesticated animals *only*—above all the dogs, cattle, and sheep—serve as sacrificial victims.

In the archaeological remains, this is true at least as far as offerings in "sacrificial pits" are concerned, and at all levels in the mortuary ritual, where domesticated animals are used exclusively, and with very few exceptions (as mentioned above, 2.2.3). Hunted humans constitute an exception, since they (unlike hunted animals) do appear as offerings in burials and sacrificial pits—and as mentioned in oracle inscriptions. The overwhelming majority of offerings to ancestors mentioned in the inscriptions that involve animals are from the same limited range of domesticates, and similarly also include humans (i.e. the *qiang*). As related in the special study by Zhang Bingquan,[461] offerings most often consist of cattle (*niu*), sheep, pigs, dogs, or humans (among these, the pigs are comparatively scarce, but all the others are abundant in the mortuary and other offerings). Some of these animals may have been raised specifically for the purpose of sacrifice: in contexts where the inscriptions clearly indicate sacrifices to ancestors, these animals [cattle, sheep, etc.] are often referred to by graphs that picture them in an enclosure. Thus, they are often rendered as "penned cattle," etc., in translation. Other types of sacrifices involve splitting the animals, drowning them, etc., but once again almost exclusively using domesticated animals.[462]

The almost-identical inscriptions *Heji* 32555 and *Tunnan* 3786, from a divination on the topic of "the king *shou* [hunting] [for?] Zu Yi [an ancestor]" which are

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460 Chen Pan, "Gu shehui shoulie yu jisi zhi guanxi," *Bulletin of the Institute of History and Philology* 21.1 (1949), 4–5; 7–8.

461 Zhang Bingquan, "Jisi buci zhong de xisheng;" see also Li Ji, *Anyang*, 106 ff.

462 On the various kinds of sacrifices using domestic animals, apart from Zhang Bingquan's study, see too Yao Xiaosui, "Lao, yang kaobian," *Guwenzi yanjiu* 9 (1984), 25–36; and, on recent discoveries, Liu Yiman et al., "Yinxu Huayuanzhuang dongdi buci xuanshi yu chubu yanjiu," *Kaogu* 1999.3, 295–96; for a recent overview, Wang Yuxin et al., *Jiaguxue yibainian*, Ch. 13, 592 ff., etc.

— As mentioned, there are examples of human skull bone fragments with inscriptions. They record what may be the names of high-status enemy people. Chen Mengjia (*Yinxu buci zongshu*, plate 13) cites a human cranial fragment with the inscription *fang bo yong* 方伯用 ("...enemy country lord [used =] sacrificed? [to]...") which also may record historical events, and is not divination; see also Wang Guimin, *Shang Zhou zhidu kaoxin*, 255–56; also *Wenwu cankao ziliao* 1954.4: 5, pl. 1–3 (quoted by Tsien 1962: 37). These inscriptions are akin to the trophy inscriptions on deer and wild cattle skull described above, and suggests that humans may have been used in a way similar to those wild animals. Michael Loewe ("China," in M. Loewe et al., *Oracles and Divination*. Boulder, Colorado: Shambala, 1981), 43, mentions one example of human skull bone used for divination, but also does not provide a source.

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more difficult to explain. Other scholars have pointed to a small number of similar inscriptions which suggest that wild animals were actually also offered in sacrifice, but this occurs on a much smaller scale. Zhang Bingquan listed cases where *si* wild cattle (6 cases), elephant (2), tortoise (2), and elaphure (1) are referred to in a way that suggests they may have been used in specific sacrifices, but the interpretation of the words used may be questionable.[463] Wang Guimin also cites several inscriptions that apparently include post-hunt offerings of game animals, and proposes that such offerings were made in the field at the location of the hunt in the Shang period and that the corresponding Zhou ritual was moved inside the ancestor temple. In a single Shang inscription, a tiger seems to be sacrificed (*Heji* 27339, III); in three others, deer (*Heji* 10316, 30765; *Tunnan* 1998); two others apparently include the wild buffalo or cattle *si* (*Heji* 27146, III and 32631, IV).[464] Still, these are limited numbers of divinations which demand further scrutiny, but they still would not challenge the huge preponderance of domestic animals. Furthermore, when considering these inscriptions, a distinction must be made between using wild game as sacrifice or rituals related to the hunt (either preceding or coming after the hunt, perhaps to please or appease the supernatural powers in the manner of first-fruit sacrifices, by giving up the prime catch), and on the other hand the actual offering of captured animals in such sacrifices, or in ancestral sacrifices. Moreover, the ancestral sacrifices carried out in connection with (i.e. as a preparation for?) the hunt, too, seem to deploy mainly domestic animals, rather than game animals (in *Heji* 33526, one bovine [= *niu*], probably domestic cattle, is used when "reporting" a hunt to the royal ancestor Fu Ding[465]). In the rare cases where it does seem that hunted animals are offered as sacrifices, such as most of the few examples cited by Zhang Bingquan or Wang Guimin (see above), the nature of the rituals involved is often not clearly understood. Thus, even if a number of such inscriptions can be found, they are but weak support for the idea that the hunt was intended for this purpose. The number is very small, and apart from failing to substantiate the hunting-for-victims-theory also cannot really clarify the issue of just what was done with the great majority of hunted animals after they were captured.

In the absence of wild animals confirmed in the archaeological record as mortuary or as other offerings, and in the light of the fact that hunted animals (again, apart from hunted human enemies) almost never even possibly occur as sacrificial victims in the oracle bone inscriptions, it surely is not possible to claim that the royal hunt was undertaken mainly to supply victims for sacrificial rituals. The main flaw with this argument is that it is out of sync with the proportions of victims of the hunt and in sacrifice that are manifest in the evidence, taken as a whole. It also obviously runs the risk of reducing aspects of Shang circumstances to fixed, unchanging attributes akin to the imaginary, essentialized cultural "traits" of an outdated anthropology. Still, the relationship between hunting and sacrifice does deserve further discussion and systematic exploration—but "systematic" is the key element.

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[463] Zhang Bingquan, "Jisi buci zhong de xisheng," 224–25. The word *si* possibly also refers to a deity, and is not always used for the animal as victim of the hunt, or as sacrifice (compare *Heji* 34185, discussed in Wang Yuxin et al., *Jiaguxue yibainian*, 599, citing new research by Qi Wenxin).

[464] (But see the preceding note). Compare Wang Guimin, *Shang Zhou zhidu kaoxin*, 250–52.

[465] Wang Guimin, *Shang Zhou zhidu kaoxin*, 250. This is but one example.

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4.4 The hunt as a form of military training

A number of Chinese scholars, including especially those who have searched for aspects of some more immediate practical utility behind the hunting expeditions, have suggested that the hunting expeditions primarily or at least in part should be understood as a form of military exercise, or drill. There are many references to the link between hunting and war exercises in the Classical literature, and these are often quoted to prove the point.[466] Some doubts have been expressed about the practical utility of the hunting expeditions as an exercise for war as waged during the Shang. Still, at least in the case of encircling or driving animals, the coordination of many participants clearly on some level might have benefited from the practice.[467] The link between warfare and hunting in the Shang oracle inscriptions has been reviewed in some detail by Zhong Bosheng in a recent study.[468] Apart from a few "hunting" terms that probably have more to do with military exercises or maneuvers but which occasionally included hunting (*bu*, *she*, *ge*; see above under 3.2.2), the link as discovered consists in a number of inscriptions that suggest the two activities were carried out in close sequence (either before, during, or after military campaigns), and at the same places. As already mentioned, these instances are not many. It is probable that such hunts were at times indeed related to warfare, but it is also clear that this cannot be the sole and only explanation for the Shang royal hunt. This is because it again fails to address the basic question of why the hunt should be such an important topic of divination of concern for the king, and why the king himself so often should act as the hunter.

We might, of course, speculate that the hunt is useful for the ruler himself insofar as it can provide for physical training of his own body (in a more practical sense than the aristocratic "training" discussed by Max Weber), and also preparing him for waging war himself in the regions where the hunts are carried out. In that case, hunting would perhaps be done where it is anticipated that fighting possibly might occur in the future. This is what is suggested by one Chinese scholar, who quotes Machiavelli's observations on 16th century Italy in support of this interpretation, including especially Machiavelli's advice on the usefulness of hunting.[469] But while this may

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[466] For example, ode 154, "Qi yue 七月"), in the *Shijing*, quoted above, goes on to explicitly link a collective hunt (apparently carried out by the subjects of a local lord, a nominal vassal to the Zhou king) with training for warfare: "...there is the meet [or: collective hunt], and so we keep up our prowess in warfare; we keep for ourselves the younger boars, we present the older boars to the prince..." (Karlgren, *The Book of Odes*). The *Zuozhuan* contains several brief references to the *da sou* 大蒐 or "great hunts" (such as Duke Cheng year 18 [*Zuozhuan*, p. 910] and Duke Xi year 27 (cited in H.G. Creel, *The Origins of Statecraft in Ancient China* [Chicago: University of Chicago Press, 1970], 286) where the Duke Wen of Jin gathers his army for the *da sou*—but this not described further and is interpreted by the *Zuozhuan* editor Yang Bojun as an "inspection" (Yang Bojun et al. eds., *Chunqiu Zuozhuan cidian*, 47). When early references to *da sou* are interpreted as "great hunts," this is by inference from descriptions of *da sou* ceremonies in the *Zhouli* and other sources even later than the *Zuozhuan*. Yang Kuan (*Gu shi xin tan*, 258–59), provides a reconstruction based on several different works, describing how a temporary enclosure was erected and soldiers hunted animals set loose within it. In these later versions, it was thus no longer understood as being carried out in the wild, and quite different already.

[467] Creel, *The Origins of Statecraft in Ancient China*, 286.

[468] Zhong Bosheng, "Buci zhong suojian Yindai junli zhi yi—Yindai de da sou li," *Zhongguo wenzi* 16 (1992), 41–164, as cited in his second article, "Buci zhong suojian Yindai junli zhi er—Yindai de zhanzheng li," *Zhongguo wenzi* 17 (1993), 98–99; where he takes hunting and warfare in the oracle bone inscriptions as a precedent for the later "Da sou" hunt.

[469] Yang Shengnan, "Yinqi buci 'tian' zi shuo," 66; citing Machiavelli, *Il Principe*, p. 42.

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be true, such a Machiavellian hunting lord really would have no need to find any real animals or participate in killing them, as the Shang king evidently did. He also, strictly speaking, would not need to divine whether the hunting expedition would be an auspicious or a successful undertaking, nor would he need to make a specified record of the catch after its completion.

While the Shang royal hunts probably often could and did serve as a form of practical military training, such a function is not explicit in the oracle bone inscriptions, and in any case would still be insufficient to explain the phenomenon. However, the link between hunting and warfare should be explored further, especially in the oracle inscriptions (the archaeological data cannot provide much help, except perhaps through data on Shang weapons). There was obviously a connection between hunting and warfare, but it probably went far beyond mere practical rehearsal.

5. Discussion and conclusions: The Shang royal hunt as a lever of state formation

Much of this article have been devoted to the critical review of existing sources, as well as earlier studies. The review of existing information has been necessary in order to establish what we really know as well as also the limits of what we can know, about the Shang royal hunt. Some of the problems with the existing archaeological record can be remedied only by improving the research design of future excavations and analysis, and by setting aside the hitherto rather too uncritical acceptance of the previously gathered biological data and their interpretation. The oracle bone inscriptions are still available for further study and also are augmented by new finds. Enormous advances have been made and continue to be made with regard to their interpretation. In the following, based on these reviewed data, I present a series of preliminary conclusions regarding the Shang royal hunt, as well as some major issues that remain to be explored from the new perspectives developed here.

5.1 The wild and the domesticated

The most striking pattern discerned in our empirical data is the stark dichotomy revealed in Shang use of wild and domesticated animals. The Shang kings' play on the dynamic potential inherent in this dichotomy fuels the dynamic growth of the state in which it is as a lever, a key tool, used by the kings not just for legitimation in the present, but seized upon to build up their position.[470]

The record suggests that wild animals (deer, tigers, etc.) are almost never given up in sacrifice. Domesticated animals, on the other hand—cattle, sheep, dogs, pigs, and the prestigious horses (and als humans, on which more below)—are all used as offerings, in large numbers, both inside and outside of mortuary contexts. The

[470] For an overview of the archaeological data and the use and distribution of offerings and other remains, see table 1, pp. 168–69.

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domesticated animals dominate in the recovered animal remains not only in mortuary contexts but also in the "sacrificial pits," as well as in the "ash pits." The animals used as offerings inside human burials are mainly dogs, cattle, and sheep (but not pigs); the use of limb bones from cattle, sheep and pigs[471] in a special set of offerings is also widespread, again found more often in high-status than in low-status burials. The only exceptions are the wild and exotic animals found in several royal tombs and in sacrificial pits in the same royal cemetery area, which is the only mortuary context where animal offerings outside of the limited range of domesticated animals are present: wild or "semi-domesticated" species such as deer, "pets" such as the monkey, or exotic species such as the whale bones of several royal tomb or the horses with chariots, high-prestige items related to warfare and intimately associated with higher-status burials.[472] Animal offerings are dominated by domesticated animals there, too, and there seem to be no cases where any animals outside of the above-mentioned range or set of domesticated animals are used in human burials other than the royal tombs. The emphasis on the same range of domesticated animals is equally strong in the "sacrificial pits" whether these are situated immediately outside human graves in the Xibeigang royal cemetery area (probably closely related to, or even part of, the mortuary ritual) or occur—most likely as building consecrations—at Xiaotun. Animals in these pits were used in patterned ways with set numbers of individuals, including single-species pits for sheep, dogs, or cattle and the combination of cattle and sheep, or of dogs and sheep (such as in the pits related to B7, B11, and B16 within the major building complex). Again, it is only in the Xibeigang royal cemetery area that there are any exceptions to the overhelming dominance of this small range of domesticated animals.[473]

Wild animals, as captured prey, were of course brought back to Anyang, and their meat was consumed there. Their remains found in ash pits must have been discarded as refuse from such meals, as parts of animals not used for other purposes, etc. All these vast numbers of animals were brought into the commanding royal center, frequented by such famous royal hunters as king Wu Ding. They were brought there to be killed, sacrificed, eaten, or used in other ways, their horns, antlers, shoulder blades and other body parts processed to serve further purposes. They were brought in dead or alive, bound or caged. In the case of the tigers discovered in the palace area, perhaps their very arrival was one of the main points, and the very announcement of their coming may have served the king's purpose more than

[471] The pigs are actually problematic: they only occur in this form as a grave offering, and are only seen in the context of a "sacrificial pit" in one exceptional case (M209, 2.2.3): special taboos may have governed the use of pigs. It is also not clear what species the disarticulated, broken pig bones in waste pits belonged to (see Shih, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 12–13). We would like to know if the pig limbs in graves were from a domestic pig and the consumed pigs were wild boars.

[472] For several interesting examples of burials of "pet" animals (such as favorite dogs or horses) by kings and scholars in the Eastern Zhou period, including the debate over the burial of the king of Chu's favorite horse (where the king in the end was persuaded to cook the horse as food instead of "wastefully" burying it) and the burial of Confucius' dog, see Danielle Eliasberg, "Pratiques funéraires animales en Chine ancienne et médiévale," *Journal Asiatique* 280.1–2 (1992), 119–24. Eliasberg mistakenly says (p. 123) there are no examples of animal burials from more ancient periods. At least some of the examples of dogs and other animals that I have cited from the burials of "pets" by Shang kings qualify as such burials).

[473] Such as the monkey and elephant pits (and the twelve animal pits from which the remains have now been lost).

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any concrete use (this is suggested by the many oracle divinations about the auspiciousness of tributes presented from abroad of various animals, such as horses, turtles, etc.). Given the many unanswered questions on such issues, every scrap of information on the splinters of smashed-up bone in "ash pits" would have been valuable—which is why it is so regrettable that the early reports often note only unspecified "animal bones" and provide very few details; that many of the early remains themselves, if collected at all, have been lost; and, especially, that most post-war research unfortunately also has been conducted with insufficient attention to these issues.

Which note that the very same pattern seen in the archaeological record is repeated with a vengeance in the corresponding oracle bone inscriptions. We cannot fail to mention both the hunting of wild animals and a host of sacrifices made to Shang ancestor-spirits and other deities, almost exclusively performed with victims from the same range. In the large corpus of oracle bone inscriptions that describe the several types of sacrifices where animals are "used," the offerings are made up almost entirely of bovines, sheep, pigs, dogs, and of *qiang* enemy people; but almost *never* any of the *wild* animals, not even deer, the number one prey animal.[474] The distribution of sacrificial offerings and other uses of animals is listed in Table 1 (p. 168–69).

On one basic level this makes much sense: one cannot give up what does not already belong to oneself. The massive Shang use of precisely their own domesticated animals as victims (that is, giving them up and destroying them in sacrifice), is testimony to this basic truth—something which also corresponds to the pattern seen in many early agricultural societies. But this is complicated by another, equally basic fact which also is evident in the royal hunt: people also do partake of wild natural resources that they have not raised or cultivated by themselves, and which they therefore will tend to construe and treat as something that they do not own. This can apply both to animals caught in hunting, and to those wild species incorporated into human society in a process of domestication. As Valerio Valeri has conclusively shown (arguing against those who would recognize sacrifice solely within the exclusive purview of agricultural or pastoral societies), the sacrifice of wild victims is conceptually possible in both agricultural and completely non-agricultural societies. It can even be construed as integral to the cultural phenomenon of hunting itself, as witnessed in first-fruit sacrifice.[475] In such cases sacrifice still belongs within the basic parameters of symbolic renouncement from practical use and ownership, but it can assume a variety of other forms, some of which may not leave traces in the Shang archaeological record, or, alas, in the inscriptions. In other words, wild animals may have been sacrificed (perhaps dedicated to forest spirits, or the like), but they are not represented in the oracle bone record. The analysis of long-lost Shang society, which cannot be studied *in vivo*, is greatly impeded by these problems the *full spectrum* of sacrificial practice and the entire range of its vic-

[474] Zhang Bingquan, "Jisi buci zhong de xisheng," 181–232; also see above.
[475] Valerio Valeri, "Wild victims;" see too *Kingship and Sacrifice*.

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tims that is the only "fully appropriate unit of analysis."[476] Nevertheless, the empirical data does hold the key elements of the answer to our question about the Shang royal hunt, especially the strong dichotomy confirmed in the two major sources available to us. While it is not possible to exhaust the analytic potential of the full spectrum of Shang "bio-politics," the dynamic socio-political play on the symbolism of all of the living beings that are exploited, I propose that the distribution of different victims in the royal hunt is the most important key. What we are witnessing is the fledgling king's dynamic mediation between the wild and the domestic, using the manipulation of the wild in its contrast to the domesticated as a lever for the development of his state. There are several interconnected aspects to this, sketched in the following.

5.2 The usefulness of the wild people, or barbarians (*qiang*)

The treatment of enemy people, positioned by the Shang themselves (as evident in the archaeological record) as an in-between category on the wild/domestic scale of the spectrum of sacrifice, must be regarded as a crucial key element. As mentioned, the oracle bone inscriptions tell us that these enemy human beings were captured much in the same way as various wild animals were captured during hunting expeditions they frequently fall under the heading of *qiang* 羌, the special term for the only outsiders used in this way. The terminology which applies to them in the inscriptions is strikingly similar to that used for the hunted *wild* animals, notably in the terms for the "catch." As far as we can see in the inscriptions, the use of these people in sacrifices to the Shang ancestors is also very similar. At the same time, while the hunted wild animals are glaringly absent from the various sacrifices that we are able to witness in the archaeological record, the remains of human sacrifice, as well as all the sacrificial pits constructed for enemy humans very closely resemble those of cattle, horses, dogs or sheep, i.e. domesticated animals, with which the hunted wild people are included.[477] All this suggests that these non-Shang human beings were actively drawn into the Shang social dynamics as a species of conquered "wild" people transformed from the king's paradigmatic Other into a domesticated, dehumanized victim. In this process of demonstrative royal incorporation, the *qiang* were manifestly and evidently reduced to the level of "owned" or domesticated property judged appropriate for ritual renouncement within the Shang sacrificial program. In a sense, as the archaic kings' sacrificable Other, conceptually and historically distinct from such enemy polities and neighbors that on account of their strength could not

[476] Valeri noted the main aspects of this spectrum: "from the wild to the domesticated, from the unprocessed to the processed, from the natural to the artificial, and, of course, from the non-human to the human" ("Wild victims," 288).

[477] There is the possibility that some of them represent burials of people belonging to the same kin groups, but the uniform age and sex (predominantly young males) as well as the pre-burial decapitation which is evident in many cases suggest that they were enemy captives used as sacrificial victims. For one example of a precedent of collective reburial of human skeletons at the Yuanjunmiao Neolithic cemetery, see Keightley, "The quest for eternity in ancient China: The dead, their gifts, their names," in *Ancient Mortuary Traditions of China* (Berkeley: University of California Press, 1991), 12–24.

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possibly be reduced to this status, these *qiang* can be said to constitute China's first "barbarians."[478]

The large numbers of beheaded humans in the archaeological record directly exemplify this intermediate category of wild people, or barbarians—human Others that are both hunted and sacrificed as animals. As victims they share the fate of decapitation with only a few of the animals harnessed as domesticates (some of the Shang-owned dogs, horses, etc., which most often are used whole and remain articulate, as in the massive sacrificial pits where rows upon rows of these animals are lined up to serve their purpose). Why should so many of the human offerings have to be beheaded, in contrast both to those animal offerings (hounds, etc.) and to the human offerings (most likely Shang servants or other subordinates)[479] seen in royal tombs? The answer to this question, I believe, is to be found in the manifest closeness of these people to the Shang self (they walk on two legs, their physical constitution is visibly similar to that of the Shang people, etc.). Decapitation was less urgently necessary for most animals, already radically sub-human and not in need of such reduction. Note, too, that most of the severed heads have been confirmed as male: these were potential (male) warrior representatives of their kind, all the more necessary to rob them of their will to fight, in symbolic decapitation.[480] By the com-

[478] They should therefore not be written as "Qiang," because this would suggest a proper name, of a place or of an autonomous political entity or ethnic group, which in this sense they are not, even if there was a Qiangfang polity at some point. For an example of the commonplace arguments "ethnifying" the "Qiang" (in this case, as the descendants of the Xia), see Zhu Qixiang, "Shuo Qiang—pinggu jiaguwen de Qiang shi Xia yimin shuo," in *Jiaguwen faxian yibai zhounian xueshu yantaohui, 1898–1998* (Taipei: Taiwan shifan daxue & Academia Sinica, Institute of History and Philology, 1998), 165–72; and many other handbooks of oracle bone studies, and debates over whether or not these "Qiang" were sheep-herders, etc. See also, for a review of the data, Luo Kun, "Yin-Shang shiqi de Qiang yu Qiangfang," in Wang Yuxin, ed, *Jiaguwen yu Yin-Shang shi* (Shanghai: Shanghai guji, 1991), Vol. 3, 405–26; also Keightley, *The Ancestral Landscape*, 106–107, also 68, 74 n. 51, 77, etc.; and for another rebuttal of the view of Qiang herders, Gideon Shelach, "The Qiang and the question of human sacrifice in the late Shang period," *Asian Perspectives* 35.1 (1996), 1–26; on the *qiang* as an intermediary, see again, Liu Yiman et al., "Yinxu Huayuanzhuang dongdi buci xuanshi yu chubu yanjiu," 295. On "qiang/Qiang" as simultaneously a tool of signification and a *potential* ethnic label in the Shang period, and in Chinese history, see Wang Ming-ke, *The Ch'iang of Ancient China Through the Han Dynasty: Ecological Frontiers and Ethnic Boundaries* (Ph.D. dissertation, Harvard University, 1993), and *Hua-Xia bianyuan: Lishi jiyi yu zuqun rentong* (Taipei: Yunchen wenhua, 1997). Wang Ming-ke shows brilliantly that the term did not represent a single stable ethnic group but rather was a generic Chinese term for borderland barbarians with whom Shang people came into contact, and which was then re-used in later periods. It is not necessarily ethnolinguistically related to the Qiang "minority nationality" officially recognized in China today. — As for the general development of the Chinese conceptions of the barbarians, including my suggestion that the *qiang* humans falling victims to royal sacrifice at Anyang constituted the first Chinese barbarians, see my article "On the 'Raw' and the 'Cooked' barbarians of imperial China," 161 n. 64, etc.; on headhunting warfare as sacrifice, see also my Ph.D. dissertation, *The Fate of Sacrifice and the Making of Wa History* (University of Chicago, 2000), Vol. II, Ch. 5, 287–354. On theoretical aspects also Valeri, op. cit. (esp. "Wild victims").

[479] Who, in contrast, are left with their bodies intact (while the heads of those decapitated were cut most violently, sometimes through the jaw). As discussed earlier, I suggest that this is because the intact bodies (whether they are the remains of elephant *mahout*, falconers, charioteers, domestic servants or the like, all interpreted as fellow Shang subjects) are interred whole because they are meant to continue their service to the deceased in the afterlife, and thus cannot be mutilated by decapitation, which would render them useless for such tasks—of course, such a "giving up" is the central purpose of sacrifice in the first place. In this sense, as fellow human beings put to intentional waste, the *qiang* barbarians represent the highest-order sacrifice of all.

[480] For the sex of these victims, see Zhongguo shehui kexueyuan et al., *Anyang Yinxu tougu yanjiu* (Peking: Wenwu, 1985), 109–118; cited in Shelach, op. cit., 15 ff.—It is probably no accident that the tiger, apparently, was also beheaded each time it was captured—or that "he" is so frequently known as the "king of the forest," perhaps even thus known by the Shang...

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bined virtue of their designed status as non-Shang people and their visible potential humanity, these men (and perhaps *qiang* women, too) represented at once the most formidable threat to the Shang monarchy and the most precious victim that could be captured from the wild. As fellow humans—but outside of the other *fang* countries that remain unconquerable (and therefore instead become the focus of shifting and alternating warfare and alliance-making)—the *qiang* as humans still retained the potential capacity for independent sociocultural development, and thus still represented a potential challenge to Shang domination (which here can be understood both on a human level and on the level of the subjugation and domestication of wild animals). These barbarians are useful precisely in that they can be publicly denied their original human capacity and autonomous dignity. Their use in sacrifice, as if fit to be renounced through killing and waste, is the way in which they are deployed as a most powerful signal, resounding both within and outside of Shang society, confirming and renewing the growing, awesome power of the Shang king.

One consequence of this reasoning is the revision of our understanding of the expression of social dimensions in the Anyang mortuary data. They do not consist in a fourfold division of Shang society as royals, aristocrats or officials, commoners, and captive slaves,[481] but also including a Shang vs. non-Shang distinction that is crucial to accounting for the dynamic life and expansion of the state. The seemingly odd fact that one of the late Shang kings bore the name of Qiang should be interpreted as one sign among many of the close parallel and symbiotic existence of the king and the barbarians, his most precious and useful victims.[482]

Another consequence of this perspective, which encompasses not just Shang and its human Others but also the animals, concerns our understanding of the potential symbolic value of the tiger and other fierce, wild animals in their role as adversaries and as sacrificial victims. The *qiang* victims, I propose, were made to symbolize the ongoing incorporation of subjects under the sway of the Shang king, as they were reduced to the role of a pawn in the king's game, as an ambivalent figure balancing between the securely controlled populace and their domesticated animals, and, on the other hand, the fierce animals and other enemies of the wild.[483] The wild beasts clearly do not carry the weight of *qiang* human victims. But such animals are, I would

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[481] See K.C. Chang, *Shang Civilization*, 231, fig. 60 (characteristically, both including the *qiang*, and setting them apart). Gideon Shelach (in "The Qiang and the question of human sacrifice in the late Shang period") has pointed out that the sacrifice of large numbers of humans represents a loss of labor force inconsistent with the various Chinese Marxist-evolutionist assertions that these victims were "slaves" (a categorization arising from the forced application of a rigid scheme of social evolution that always runs into difficulties explaining where sociopolitical change comes from).

[482] On the fourteenth Shang king, Qiang Jia, see Keightley, *The Ancestral Landscape*, 106–107. This may be a variant on the Dumezilian theme of the Stranger-King, a play on the radical rupture between the king and his society, paralleled in the ambiguous status of the barbarians. Compare the names of other archaic animal-kings, such as Jaguar Paw, and Animal Skull, both rulers of the forest kingdom of Tikal in today's Guatemala (J. Marcus, "The Peaks and Valleys of Ancient States," in Feinman and Marcus, eds. *Archaic States* [Santa Fe, New Mexico: School of American Research Press, 1998], 65–66). King Qiang Jia's name may also be taken as further proof that the term *qiang* was never limited to service as an ethnic label, corresponding to some specific group of people, but always served the *Shang* as a label comparable to "the Barbarians" of the Greek world, also not one single people but the *Greek* limit figure of "wild" people (and thus properly spelled barbarians, not Barbarians). On the interdependence of the sovereign and the barbarians, see my article "On the 'Raw' and the 'Cooked' barbarians of imperial China," *Inner Asia* 1.2 (1999), 139–68.

[483] Cf. the similar divisions found in ancient Indian texts (see, for example, Doniger, *Other People's Myths*).

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suggest, assigned essentially the same sort of conquered significance. There is a similar tendency to "dismantle" them, evident in the lack of complete, articulate intentional burial. Instead they are found as disarticulated or fragmented remains. The tiger skulls found (but not described in detail) suggest that the tiger came close to approximating the stature of human enemies worthy of decapitation.[484] We must, however, imagine that the symbolic yield even of the fierce tiger was lower, because of the limited capacity of animals for independent development compared to that of humans. The difference (again, as empirically manifest in the Shang archaeological and inscriptional record), is that the wild animals ultimately lack the socio-cultural capabilities and strategic cunning of ordinary humans, on the one hand, and on the other hand, unlike such animals that lend themselves to domestication, wild beasts cannot even be incorporated as domesticates to form a subservient, controllable part of Shang society. This is, I would suggest, why the beasts, unlike the intermediary *qiang* barbarians, are not allowed or deployed within the main range of the sacrificial victims propelling Shang social dynamics.

I'll have more to say below about the importance of hunting to the growth and consolidation of Shang royal power, as well as about the larger trends involved in early Chinese state formation. But first, several other aspects of the royal ***mediation***, through divination and other means, of this social landscape and the wild/domestic dichotomy must also be discussed.

5.3 Animals as the king's medium of divination

The exclusive use of domestic animals not just as the main victims of sacrifice, but of their scavenged bones as the primary medium of divination, could be understood (in a similarly unabashed structuralist fashion) as yet another reflection of their intermediary position between the wild animals and the Shang people.[485] Controlled by people, yet non-human, the domestic animals offered an almost self-evidently suitable link to the unpredictable wild (including its animals), and equally well to the similarly unpredictable non-Shang enemy peoples, both the more resilient *fang* powers, and the pitiful *qiang* "captured" in war/hunting expeditions similar to wild animals. I should like to go further, and suggest that their use as medium is conceptually related to unpredictability in a general sense. It may be objected that none of the many cattle, sheep and dogs that served as sacrificial offerings had any of their twin scapulae removed. While the source was the common cattle, and the turtle, the actual divination media did not immediately coincide with the very animals that served in sacrifice – only on the species level, and only in the case of cattle.[486] Still, it

[484] As opposed to the domestic animals buried as offerings, where skeletons for the most part were complete and articulated, in which case they may have died by having their throat sliced but without further dismemberment or mutilation.

[485] Divination using milfoil stalks, common in the later periods of the Zhou and the Han, can reportedly also be traced back to the Shang.

[486] The divinatory media could have come from the cattle that provided limbs for the set of offerings seen in many sacrificial pits (above, 2.2.2); or perhaps from those used in the many "split" (*mao*) offerings commonly mentioned in divinations on sacrifices of cattle (*niu* 牛) to ancestors (cf. Zhang Bingquan, "Jisi buci zhong de xisheng").

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is likely that the scapula bones indeed came from domesticated bovines. As for the special role of turtles, I have already noted that the shells of the turtle, famous for its unique longevity, was used for divination long before the Shang and continued well after.[487] The symbolic use of the turtle supplements that of domesticated cattle—and they, too, may well have been "domesticated:" it is quite likely that the turtles were actually bred by the Shang for the purpose of divination.[488] Both cattle scapula and turtle shells were doubtless also valued for their flat, smooth surface, ready for inscription. However, my interpretation is strongly supported by the fact that while deer were captured in large numbers and their scapulae easily could have been used, they never were. Note, too, the fact that deer almost never appear as mortuary offerings, and are almost never mentioned together with domestic animals in any of the contexts where these occur in the oracle inscriptions: not as ancestral offerings, not as "penned" animals, and not as tribute (living beings as tributary offerings included human captives, horses, dogs, bovines, and turtles[489]). Thus, only animals that were domesticated or controlled by the Shang were used as divination media.

This should also suggest that the domestication of deer, if attempted, was a failure (as it most often has been, throughout history, where it has always remained just beyond this possibility). Not all animals are suited for either subjugation or doglike cohabitation with our species—or, indeed, suited for the Shang symbolic play on domesticated animals as media for the divining and subjugation of their brethren in the wild. A simple opposition between wild and domestic is always overly simplistic: the term "cultural control" could be used to cover intermediary stages, where animal populations are subjected to some degree of control but not total dependency[490]—and where the cultural play on symbols will always thrive.

The confusing variety of bovines, the source of cattle scapulae which constitute a major divinatory medium, are also, of course, of special interest precisely in how they constitute a grey-zone similar to that of the deer. The Anyang remains might

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[487] Divination with turtle shells continued into the Han imperial era (probably because of the symbolic importance attached to the turtles' presumed longevity, which gave it a role in Han beliefs of the afterlife; etc.; see Michael Loewe, "Man and beast. The hybrid in early Chinese art and literature," *Numen* 25.2 (1978), 97–117, and "Divination by shells, bone and stalks during the Han period," *T'oung Pao* 74 (1988), 81–118.

[488] Turtle breeding for divinatory purposes is noted in Sima Qian's *Shiji* (ch. 128, "Guice liezhuan 龜策列傳" p. 3225; recorded in the Han dynasty, i.e. long after the demise of the Shang); see too Keightley, *Sources of Shang History*, 12, 15–17 (turtle breeding). On turtle species, see 2.3.2.

[489] The divinatory turtle shells often have notations on the source of the delivery and the number supplied. See K.C. Chang, "Ancient trade as economy or as ecology," in J. Sabloff et al., eds., *Ancient civilization and trade* (Albuerque: University of New Mexico Press, 1975), 217; Hu Houxuan, "Buci zhong suo jian zhi Yin dai nongye." On tributes see too Keightley, *Sources of Shang History*, 35; "The Shang: China's first historical dynasty," 281; K.C. Chang, *Shang Civilization*, 236 ff.

[490] Nomads follow herds in seasonal movements and partly control their breeding, as for example the Sami reindeer of northernmost Europe, and so on; hunter-gatherer people often capture and keep animals as pets, or keep live game animals in captivity as a form of "live storage." See Howard M. Hecker, "Domestication revisited: Its implications for faunal analysis," *Journal of Field Archaeology* 9 (1982), 217–36. The conflicting evidence on Anyang elaphure deer (local inbreeding, vs. evidence for hunting in the oracle bone inscriptions) may indicate a combination of approaches to the deer, perhaps not only the elaphure, on the part of the Shang people. This invites research on the relative representation of young animals, the male/female ratio, etc. The elaphure (Anyang deer) was described as a domesticate by Teilhard and Chardin on grounds of its strange antler forms, perhaps the result of breeding.

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include both the Anyang buffalo and varieties of domestic and wild cattle, and there is still considerable confusion regarding the status of the buffalo and of the hunted wild cattle (including the famous *si* 兕 of the oracle bone inscriptions, mentioned in both section 2.3.2 and 3.2.3). I believe future research, and debate, must attend to the type of cultural aspects I have indicated here. Teilhard and Young for their part believed that the cattle were securely domesticated animals, and the buffalo a possible domesticate with an additional wild presence. It is uncertain if wild cattle bones have been included among the bovine remains in storage or waste pits (perhaps included under the heading of larger buffalo), and we do not have any means to know, in order to explore what further differences there might have been in the uses of wild and domesticated bovines. Shih Chang-ju suggested that all bovine remains found in sacrificial pits without exception were from domesticated cattle, *huangniu* 黃牛, identified by their smaller size. Only in waste pits did both this type of cattle and buffalo remains occur together. Both the buffalo (listed as numerous, "over 1000" in the several reports that are available) and the smaller cattle may thus have been deposited after sacrifices or consumption as food (or both, in ritual feasting!). The smaller cattle (the diminished stature of which probably indeed is a result of domestication) may have been the only one accepted for use in sacrifices, in addition to serving as a medium of divination, while other bovines were hunted, eaten as food, and used in other distinctive ways.[491] Clarification of these fascinating issues would certainly require new research on skeletal remains.

5.4 Incorporation of the wild as a form of risk management

At the heart of Shang divination, as with of all forms of divination, is the wish to be able to know and then to influence or control the future. The Shang diviner-king the socially significant position of mastering, influencing and manipulating the results of divination and by extension the future, by means of his privileged access both to the oracle voices and to the means of interpreting and recording them.

Shang divination was often carried out at different places, and on different consecutive days. The same bones were used again and again over a period of several weeks, if not months,[492] in series of divinations which were then brought home to Anyang. Hunting divinations, too, were often made in the field in this manner, and

[491] But not for plowing: there is little or no evidence for plowing with any animal in China until long after the Shang dynasty. It did not become widespread until perhaps in the Eastern Zhou. The history of plowing in the Shang is much debated (Chen Wenhua, "Shilun woguo nongju shi shang de ji ge wenti," *Kaogu xuebao* 1981.4, 407–26), and Xu Jinxiong, "Jiaguwen suo biaoxian de niugeng," *Zhongguo wenzi* 1981.4, 91–113. Xu agrees with the interpretation that plowing existed, based on the oracle bone graph believed to have persisted into modern times (*li* 犁); but also refers to a passage in the late Zhou historical text (*Guoyu* 國語) which laments that cattle, properly sacrificed in the ancestral temples, increasingly are used for work in the fields (Xu, op. cit. 95). Plowing may have been started in the Shang, but was never widespread; and the main use of domesticated cattle was as a sacrificial animal (as attested in the inscriptions, and in the archaeological record), and possibly for transportation. Anyang bovine skeletal materials could be studied for more answers. Compare C. Higham et al., "The bovid third phalanx and prehistoric ploughing," *Journal of Archaeological Science* 8 (1981), 353–65.

[492] Keightley, "The origins of writing in China: Scripts and cultural contexts," 185.

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then brought back to the royal center.[493] Hunting divinations, like other topics, was often based on a consecutive series of cracks in the bone, or plastron, and there may be several accompanying inscriptions concerning the same topic, placed on the same bone or shell—series of attempts to consult of the oracle-powers, undertaken when the results were unsatisfactory or, put otherwise, when the king or the diviners believed that the divination failed for some reason. For the same reason, divination often were done with pairs of inscriptions divided on positive/negative charges (or, strong/weak), also indicating that the effort was *not* simply to acquire hidden knowledge about future events but to be able to seem to be influencing them.[494] I believe that this propensity is also evident in the intentional deployment of the expression *ruo* 若, "approval," which is meant to indicate that if a certain course of action is taken, it will be approved by the powers-that-be. Few hunting inscriptions explicitly invoke the powers of spirits in this way,[495] but the same basic assumption also governed them, and the general trend towards increased control and regularization of the inscriptions is also present, indeed pronounced. This trend is increasingly evident in the last Shang inscriptions (Period V), where the prayer-like injunction "if we X [at Y, with Z, etc.], there will be no misfortune" is increasingly used, an expression of an intensified quest for certainty in an uncertain world (see too below, 5.5).

In the Shang context, the outlook for future harvests and the uncertainties of war, as well as pests and disease among humans or domestic animals, are likely to have counted as the most important risk factors. In many early agricultural societies where increasing populations relied heavily on grain (corn, etc.) for food, the risk of crop failures was a real and dangerous threat. With settled agriculture, there is a lot of labor investment and potentially also high yields (at least as compared to mobile hunting and gathering of wild or semi-domesticated resources[496]), but the main drawback is the much higher risk, in case of crop failure, of catastrophic disease and famine. Population increase makes the risk of famines even more pronounced, and so the requirement to find more fields and organize production and granaries becomes a pressing issue in a vicious circle wherein epidemics can strike much more violently and effectively than in less concentrated and less sedentary societies. This may be especially true of early agricultural societies where there was little variation in the diet, and the majority of people often suffered from nutritional deficiencies and related diseases. People who are mainly hunter-gatherers invest less in their food

[493] On these "traveling divinations" away from the ancestral temples but with records carefully kept and brought home, see Keightley, op. cit., 45–47. As mentioned earlier, they have been recovered either as scattered, discarded fragments in late Shang ash pits, or in buried storage, sometimes in large caches. The latter constitute past "archives" assembled in Shang times (they may not have been meant to be accessed again, and, incidentally, in themselves may constitute a sacrifice in our definition: The bones of the famous YH127, possibly the former archives of king Wu Ding, discarded after his death; E. Shaughnessy, personal communication, July 1994), may have been smashed *before* they were buried.

[494] On the metaphysical implications of complementary charges in relation to hunting and other expeditions, see also Keightley, *The Ancestral Landscape*, 115–16, 116 n. 60.

[495] See Keightley, *The Ancestral Landscape*, ch. 7, esp. 111 ff. There is one divination where a "prayer" (*xi*) is addressed to an ancestor for success in the hunt ("[...] To Father Jia, [we] pray for [good] hunting [*tian*]" *Heji* 28278, II-IV). (The inscription does not spell out the result of the *tian* activity, so it is not clear that *tian* here actually stands for the act of hunting).

[496] Herding clearly also belongs in such an in-between category. On the development of herding, see Okamura Hideki. "Indai ni okeru shusan no henkaku," *Tôhô gappô* 27 (2000), 1–48.

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getting, which may yield less, but they also are at a lower risk level in terms of famine and epidemic diseases because they are less numerous and can move away more easily if game or plant resources should become scarce. Of course, even in their world there are numerous unpredictable factors which may form topics for divination (the availability of game, or the success of a hunt), but the dangers of failure would seem to be much smaller than in an agricultural society like the Shang.

The growth and the institutionalization of divination seen in the Shang period was intimately linked to the growing importance and expansion of agriculture.[497] The intriguing use of the word *tian* 田 (an obvious picture of a humanly organized—agricultural?—field, split into four subareas) for "hunting" certainly points to a significant relation between agriculture and royal hunts, which may involve the forced conversion of the wild into farmland. The increased use of this word in the sense of hunting towards the end of the late Shang is probably, as I suggested above (3.2.2), a reflection of a successive increase in the conversion of the "wild" plains into farmed land (regrettably, the nature of and importance of agriculture both in the pre-Shang Neolithic cultures and in the Shang is imperfectly known[498]).

Assuming that this general picture is valid, it is conceivable that the attractiveness of the hunting expeditions as a royal topic of divination in contrast with the agricultural issues of threatened harvests increased steadily. The hunt surely was risky and unpredictable—but while a hunting expedition may fail, it is difficult to imagine that a failed hunt on a certain day could amount to a royal disaster comparable to the perilous consequences of failed harvests or serious outbreaks of pest among the domestic cattle or sheep herds. Also, while hunting wild animals must have been risky at times, and unpredictable in many ways, it was probably not nearly as dangerous and uncertain as confronting the concerted efforts of human enemies in war.[499]

This is why I suggest that in addition to the tremendous symbolic value inherent in the king's sustained conquest of wild animals, wild people, and of wild fields conquered for cultivation, the hunt would have provided a particularly attractive royal pursuit precisely in how it would demonstrate for the populace not only the king's sovereign position (in the "Weberian" terms cited above), but also a willing-

[497] Recent inquiries into of how "risk" is perceived and dealt with in agricultural and hunter-gatherer societies is exemplified in Paul Halstead et al., eds., *Bad Year Economics: Cultural Responses to Risk and Uncertainty* (Cambridge: Cambridge University Press, 1989) and E. Cashdan, ed. *Risk and Uncertainty in Tribal and Peasant Economies* (Boulder: Westview Press, 1990); on the increased vulnerability to catastrophes (caused by weather, such as hailstorms just before a harvest, or by pests etc.) of peoples dependent on agriculture, with the increased localization of resources that comes with agriculture, see too D. Rindos, *The Origins of Agriculture. An Evolutionary Perspective* (Orlando: Academic Press, 1984), 143 passim; 271 ff.

[498] Henry T. Wright, "Rise of civilizations: Mesopotamia to Mesoamerica." *Archaeology* 42.1 (1989), 96–97, noted that archaeological research in the area has focused on elite centers and tombs, and there is still a lack of studies of subsistence patterns, of lower-status settlements and regional settlement surveys (Liu and Chen, this volume, exemplifies exciting new scholarship that complements this discussion).

[499] See above. It is true that the hunts were controllable and punctual in a way that warfare was not, but only for the decision of when to go out (in war with humans the enemy might force one's own mobilization). Apart from that factor, for which there would also be exceptions (tiger attacks, etc.), the hunts, resembled the unpredictability of war with dangerous adversaries that might force one's hand in unpredictable ways once the expedition was under way. The outcome, too, was unpredictable in that it was not certain that any animals at all could really be found, captured or killed.

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ness to take on risks on behalf of his community—without risking too high costs for himself. The king facing symbolic dangers, tigers and other dangerous wild animals that would have been frightening to the general populace, is a potentially useful image which the kings seized upon. The risk-taking was not "purely" symbolic: The kings did put themselves at risk by personally conducting the hunt (confronting and subduing the wild, although with easily herded animals such as deer this aspect would have been more symbolic than actual, as opposed to the case of dangerous wild cattle, or tigers).[500] As these hunter-kings ruled over an agricultural society where harvest failure and enemy attack were among the most important uncertainties, the confronting and capture of wild animals in the hunting expeditions helped create an arena for a dangerous but symbolically extremely valuable risk-taking, on which the kings might build and reaffirm their prestige before their own subjects as well as before their enemies—and just as emperor Hadrian, before themselves as well—thus their status as arbiters of Shang society's internal and external power relations was, achieved *by way of* setting themselves up as both attentive arbiters and violent conquerors of the dangerous wilderness surrounding their society.

5.5 The regularization of state divination

The role of the hunt as a valuable risk-taking exercise, and the changes in that role, can explain not only the tremendous general interest in the hunt shown by the kings but also the highly interesting trends towards regularization of the oracle bone divinations during the relatively short time-span of 150 years from which they derive, as previously demonstrated by David Keightley and other scholars.[501]

As is evident from the many hunting inscriptions divined in the field and returned to the cult center of Anyang for storage, the topic of hunting remained one of the most important divination topics throughout the Late Shang, but it gained increasing relative importance and became even more conspicuous in the last phase, Period V. One major reason was the disappearance of many other *ad hoc*-topics divined in the earliest inscriptions.[502] In the early phase of the oracle bone "window" on Shang history, king Wu Ding divined on a very wide range of different topics, from war, sacrifices and hunting to his own toothaches and the child deliveries of his

[500] There are few records of any calamities actually striking in connection with hunting expeditions. Examples include the chariot accident mentioned above (*Heji* 10405, I—see p.114–15), and the death of the Shang king Wu Yi: "while hunting between the rivers He and Wei, thunder roared, and Wu Yi was struck dead" (Sima Qian, *Shiji*, "Yin ben ji," 104). This incident occurred after Wu Yi, who is described by the Han dynasty historian as a wicked king, had insulted the "god of heaven" by having a mock god lose a wrestling match (with himself as audience, not as a wrestler) and shooting an arrow at a leather bag filled with blood, calling this to "shoot Heaven." Even if invented or embellished *post factum*, this can be understood as a case of a king overstepping the limit of challenges open to humans, and that his death came as punishment during a hunting expedition when he was exposed to the risks inherent in it is probably highly significant. This incident should also be considered in the context of the ideology of not over-taxing the hunting-grounds and fishing-lakes, mentioned in several later literary sources (see too note 320; similarly, the *Liji* speaks of game animals driven out in front of the king during hunts, but only after they first have the choice of leaving through an escape route).

[501] Keightley, "The Shang: China's first historical dynasty," 243–45, 261–62; also Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," 70.

[502] Institute of Archaeology, *Yinxu de faxian he yanjiu*, 179.

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consorts. Now the divination inscriptions themselves became much more standardized and, in effect, more like prayers for safety than divinations where even negative or inauspicious answers from the oracles were expected. Also, as mentioned above (3.2.5), the range of days for which hunting expeditions were divined became much more limited. The kings also became more directly involved with maintaining the divination process related to hunting. While the king earlier had sometimes carried out prognostications, and thus perhaps supervised the divination process indirectly, the prognostications were now more often explicitly listed as being made by the king himself. Perhaps as a consequence, inauspicious readings also became very rare, and the king increasingly took over the divination itself, to the point of almost becoming the exclusive diviner (so that we only rarely find the names of diviners listed in the preface, but the king, *wang* 王 in their place). Divinations also came to be carried out more immediately in advance of events, no longer long in advance, as happened occasionally during earlier periods.[503] Also, there seems to have been a successive reduction and elimination of conditional elements. Whereas before, the inscriptions were often made in pairs containing strong and weak charges, in the last period they were often prayer-like or "declarative," and very rarely made in complementary pairs.[504] The recurring standardized phrase "going and coming, there will be no calamities" was increasingly seen in many hunting inscriptions, especially towards the end of the late Shang (Period V).

Regularization may also be detected in another important aspect of the hunting expeditions, also related to their role as a state-building device. While the investment in risk-taking and conquest of the wild brought prestige in the eyes of the common people, casting the king as their master hunter, the king also used the hunt (as he did with warfare) to build relations and alliances with prominent allies and neighbors in such a way so as to promote his position as a *primus inter pares*. Casting himself as a superior, offering protection and also making a gift out of his own companionship, the aggrandizing king let the light shine on his invitees beyond the awe instilled in his own populace. The prestigious ambiance and character of royal hunting, in which such allies would be able to share, is indicated in the many inscriptions concerned with the king's companions (local lords, etc.), and also by the use of prestige items such as horses and chariots. These are devices that the archaeological record clearly indicate were items controlled by the highest strata of society and which would reflect a high prestige value placed on the king's personal presence, and his capacity to mobilize a grand setting. To have others join such hunting expeditions was likely a favor given with political purposes in mind, perhaps as a symbolic gift of an alliance that could become useful in times of conflict with fellow enemies, and perhaps as a reaffirmation of their alliance against both wild animals and human enemies. This was another, highly important symbolic function in confirming and expanding the territory or sphere of influence of the Shang king.

[503] Keightley, *Sources of Shang History*, 35–36, 122; also "The late Shang state: When, where, and what?," 550, 555–56.

[504] Keightley, *The Ancestral Landscape*. Certain exceptions indicate that the desire to influence the future by making desirable forecasts in the older form of complementary charges did persist to some extent.

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But the daring hunting expeditions into the wild later appear to have lost this prestige value. If the fleeting character of the galaxy of polities of the North China region gave way to a central state supremacy, formalizing a monopoly on violence and, notably, settling more permanently in one place (as seem to have occurred at Anyang), this aspect of the king's personal presence and *itinerant* alliance-making would be surpassed by the king's increasing isolation in his palace, elevated above his regularized armies and officials in what became more and more a bureaucratic state.[505] Matsumaru Michio suggests that the range of the king's expeditions narrowed accordingly—this really, I suggest, indicates the narrowing road which ultimately led to the sterilized, fixed hunting parks of the later bureaucratic emperors (on which see below).[506]

The demise of *primus inter pares* Bronze Age kingship halfway through the Zhou dynasty is linked to the decreasing relevance of, and the disuse of, the Shang-style royal prerogative for the conduct of prestige-building hunting jointly with allies. Accordingly, this prerogative, as an attribute of traditional kingship, was later adopted by usurpers. Both the etymology and the later usage transformation of one of the most important terms for hunting, *shou*, also supports this scenario. As has been described above (3.2.2), the word was used for royal hunting in the Shang and early Zhou, but from the Spring and Autumn period (770–476 BCE) of the later Zhou onwards it came to be used (minus the animal component, originally a dog) for how the local lords "occupied and defended" their respective area *in lieu* of and on behalf of the Zhou "Son of Heaven," who no longer made hunting expeditions like those once organized by Western Zhou sovereigns in the manner of the Shang-era kings.[507]

There are further aspects of the transformation of the hunt that suggest the regularization and bureaucratization of the state and its divinatory practices. In Period

[505] Keightley, "The Shang: China's first historical dynasty," 245, 286 ff.

[506] Matsumaru, "Yinkyo bokujichû no denryôchi ni tsuite," 127 ff., see the discussion by Keightley, "The Shang: China's first historical dynasty," 289, including on the drastic reduction of the number of inscriptions concerned with the choice of allies (who may no longer have been needed).

[507] This long-term trend is reflected in the passage of the *Zuozhuan* 左傳 for 632 BCE (four hundred years after the demise of the Shang) where the Zhou king Xiang 襄 is invited by an increasingly powerful local lord to hunt in the land of that lord, which amounts to usurping the prerogative of invitation, asking the king instead of the king inviting that lord to hunt with or for him. See Han Feng, "Gudai xunshou zhidu," 42 ff. (I am grateful to David Keightley for this reference). Han quotes a small number of Western Zhou bronze inscriptions (five) that more or less expressly cite the king as hunting at some place, as in the oracle bone inscriptions. None of them list captured animals, except the last inscription quoted by Han (Haozi *you*), which is not quoted in full. The last part says that "three deer" are awarded. Shirakawa Shizuka believed these deer were raised in an enclosure, not hunted. See his *Jinwen de shijie: Yin-Zhou shehui shi* (Taipei: Lianjing, 1989), 77. The fishing ritual of the Jing *ding* (Chen Mengjia,"Xi Zhou tongqi duan dai," Part 3, 120), is more reminiscent of the Shang hunt. Shang and the early Zhou shared several important characteristics, including the ancestor cult and a royal prerogative in divination. Recent discoveries of early Zhou oracle bones in today's Shaanxi province also is indicative of the continuities of "Shang-style" divination. Several of the published fragments have inscriptions related to hunting in a language akin to that of the inscriptions found at distant Anyang (Chen 1988: 112 [fragment no. H11: 3 and H11: 113, where the king "*zhu* ... *si*", i.e. "pursues wild cattle", at a place explicated on page 135], 123 [where the king "*yi wo mu shou* [?] *si*", i.e. "uses our herdsmen to hunt wild cattle" [tentative translation]; and plates 33, 74–75; also, H11: 86, on p. 81, is very similar to the Shang oracle bone graph for "capture" [animals]). For a discussion of these oracle bones as historical sources, see E. Shaughnessy, "Zhouyuan oracle-bone inscriptions: entering the research stage?," *Early China* 11–12 (1985–87), 146–94; on Zhou/Shang oracle bones, and their Zhou origin, see Song Xinchao, *Yin-Shang wenhua quyu yanjiu* (Xian: Shaanxi renmin, 1991), 257–58; and others.

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V, as the range of captured animals largely stayed the same, the variation in the note on captured animals in verifications[508] became almost the only part of divination inscriptions where unpredictability still lingered. As I have suggested, the archaic king had made use of the hunt as a relatively secure and easily manipulated mode of risk-taking. But now it was re-conceptualized as the one remaining arena where the capricious forces of nature and its deities were still recognized. The royal hunting expeditions had previously always been organized on an *ad hoc* basis, as when receiving "reports" about available prey somewhere. The very agility of the king, his itinerant character, had been linked with the need to be able to respond personally to immediate threats. But the regularization of divination meant the elimination of these surprise elements. Only the wild victims themselves still provided a symbolically valuable element of unpredictability and uncertainty—precisely the core element in the conception of the "wild" and of "barbarians," which are but superficially dangerous, and were only painted as such because of the vagaries of royal appearances and the demands of the project of state formation.

The notion of controlling the unpredictable, of course, is at the core of the work of divination. The lingering, increasingly regularized pretense of unpredictability quite conceivably helped justify the continuation of the divination process itself, while it declined in all other respects, as the state administrative system solidified. This overall trend was, I would like to suggest, a reflection of that the process of incorporation outlined above was increasingly successful and the Shang state thus successively became more solidly entrenched—all the while the wilderness and its wild denizens were already in sharp decline on the North China Plains.[509]

5.6 The domestication of the wild and the birth of empire

Relating to the issue of environmental and climate change, Teilhard and Young made the pertinent suggestion that "the destructive action of Man"[510] consisting in hunting and environmental destruction, may be the reason why animals like the tiger, racoon dog, and Sika deer became locally extinct. The basis for this view on climate change, pronounced with some certainty at the time, now seem much less well-founded, but

[508] See Keightley, *Sources of Shang History*, 122, etc. Hunting and sacrificial schedules are the two major exceptions to the observation that verifications (i.e. of fundamentally unpredictable factors) become less important.

[509] In this regard, note too that my self-conscious pursuit of "kingship in motion" diverges in method from more traditional Sinological approaches to the "attitudes" to animals in ancient China. Posing the questions in terms of "attitudes" is not necessarily a fruitful formulation for scientific research: we may never be able to know what was inside peoples' heads, what their "attitudes" were; what we can pursue is their surviving statements, expressions and the evidence of actions that they have taken, and we then make informed inferences from patterns detected therein. In terms of the developments of recent millennia, in which humans have overwhelmed and taken control over pre-existing natural processes in global ecosystems on the scale of a fast-moving geologic force, displacing vast amounts of animals, plants and the like, phrasing the research problem of "ancient Chinese animals" as one of "attitudes towards animals" probably obscures rather than clarifies the major issues of how humans have transformed their environment and their own social organization in the process.

[510] Teilhard and Young, op. cit., 56–58. See too above, 2.3.2.—For a parallel example of the organized hunting of similar species to extinction, see C.A. Reed, "Imperial Sassanian hunting of pig and fallow-deer and problems of survival of these animals today in Iran."

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whether or not the climate has indeed become cooler (as it seems[511]), over-zealous hunting, agricultural exploitation denuding the forests, and the related environmental degradation may all also be responsible for the decline or disappearance of many species (like water-deer, the Anyang buffalo, and others). As it is, the lack of contextual information means that the various possible contributing variables can hardly be disentangled from each other and independently controlled, which is why some of Teilhard de Chardin's and Young's conclusions now appear contradictory and easily challenged.[512] Clearly, the related fields of both climate history and, even more, socio-environmental history merit more research.

These developments are related to how royal divination and royal hunting—certainly royal hunting as practiced by the Shang (and early Zhou kings, too)—form parts of an integrated whole and find their historical end together. Shang-style divination, as a means of dealing with the threats to the very survival of the state as an apparatus, is subsumed in the sea of empire. The first, vast empires appearing several centuries after the demise of the Shang hunter-kings[513] were already equipped with vast administrative apparatuses laying claim to the total rule of much larger populations and much larger areas than the Shang. The process of constructing these bureaucratic empires (to use another of Weber's terms) may have begun already in the Shang dynasty, but was accelerated in the Zhou period when local lords increasingly gained the ability to challenge the power of the diviner-king, perhaps through the proliferation of metal and weapons technology further accelerating the extermination of wild animals (and barbarians) in the region of the so-called Central Kingdoms. Increasingly, the old forms of legitimation of rule would no longer be workable, for the very foundation of their existence, the wilderness, had been tamed. In the process, the hunt of wild animals by and large lost its meaning as an effective demonstration of the royal powers to overcome the unpredictability of nature.

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511 Several scholars have attempted to investigate Shang climate in the oracle bone inscriptions, for example through studying the distribution over the year of mention of rain, and have concluded that the period was probably slightly warmer and wetter than it is now (see K.C. Chang, *Shang Civilization*, 141). My point here is that the Anyang zooarchaeological data, as published thus far, hardly can confirm or deny these indications.

512 For example, the identification of the poorly provenienced Anyang elephant and tapir as "southern" tribute animals ignores the fact that if other "southern" species could live at Anyang, these could presumably equally well have lived nearby. Some animals, such as the takin, the bears, and the elephant, may have belonged to several different categories: rare but still indigenous species could have been accepted as tribute from afar; elephants are mentioned in oracle bone inscriptions both as a beast of prey and as tribute (3.2.3); perhaps they were also pets or household animals (the several elephants at Xibeigang found with bronze bells and human attendants are similar to many of the dogs, as are the monkeys; 2.2.3). Elephants may have been captured, tamed and kept, instead of being killed—also, the oracle bone inscriptions generally do not explicitly state that the animals captured were "killed," only that they were captured (see Part 3). In the case of the various "tributary" curiosities or exotics, closer analysis may have yielded further information. Again, the context is not sufficiently known to accomplish this—definitely not for the tapir or the rhinoceros, which were never recorded properly, and thus may have come from any period, see Shih Chang-ju, "Henan Anyang Xiaotun cun Yin mu zhong de dongwu guhai," 5. Of course, whales and marine shellfish could not have lived at Anyang, and are indeed evidence for late Shang long-distance trade. These animal "curiosities" in high-status graves (such as the whale, and perhaps also the takin and others) also suggest a long-distance trade in exotic items captured and controlled by the highest level of society.

513 The first empires were the Qin (221–206 BCE), and the Han (206 BCE—220 AD), built out of centuries of internecine warfare between those local kings that usurped the powers of the ancient Shang and early Zhou hunter-kings.

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True, later lords and even the emperors also hunted, and to some extent they could, of course, also utilize such hunts to show their power by overcoming wild beasts in a way similar to what I have suggested for the Shang. They also conducted inspection tours of their respective realms, and often hunted along the way. But their hunting park rituals are profoundly different. I believe the difference must be understood in relation to the combined factors of the exponential growth of state power, the disappearance of the wildlife, and the accompanying decline of Shang-style royal divination. Hunting "parks" are known from later periods but probably did not exist during the times of Shang kings, who hunted in the actual, still-existing wilderness. The various discussions of the hunting parks of ancient China published so far all seem to stop short of attempting to account for just why these pitiful parks were brought into being. I see their role as symbolic remnants of the wilderness, providing for a sterilized ritual hunt carried out in a microcosm after the macrocosm was already conquered.[514] The archaic kings' launching themselves far into forests and outlying areas in incessant hunting expeditions was part of an itinerant kingship-in motion very different from the universal rule of the vast empires. The Shang king's risk-taking was replaced, in the Qin and Han empires, by hunting within a confined, tightly controlled and entirely predictable "wilderness" that carried nothing of the potency of the real forest. These parks are imperfectly known, but existing descriptions generally describe them as recreated microcosms of the entire universe under imperial rule (they thus contain miniature versions and vistas illustrating not only wild animals, but every conceivable thing).[515] If, as seems to have been the case, this kind of microcosm was intended as a representation of absolute universal rule, the intention was well expressed in the manner in which animals captured and enclosed beforehand were killed in the park: The latter-day emperor "hunters" were served predictable, pre-arranged catches of prey. At the same time, the symbolic potential of the "hunt" itself was much reduced—retained only as a token of its martial, symbolic, and nostalgic value. The incessant expeditions launched by the Shang

[514] This is the reason why Zhong Bosheng ("Buci zhong suojian Yindai junli zhi er—Yindai de zhanzheng li," 139) also cannot find any evidence for hunting parks in the oracle bone inscriptions (even so, however, Zhong still holds that they ought to have existed, on the basis of their existence in much later periods). This can be described as a case of reading later history back into time, too hastily (on this point, see too Bagley, "Shang archaeology," 229–31). Edward H. Schafer, "Hunting parks and animal enclosures in ancient China," *Journal of the economic and social history of the Orient* 11 (1968), 318–43, discusses the history of hunting parks and enclosures, and notes that there is *no evidence* for the existence of hunting parks earlier than from the Eastern Zhou dynasty (King Hui of Zhou apparently established one in 675 BCE, according to a brief statement in the *Zuozhuan*, Zhuang 19 [cf. Yang Bojun, ed., p. 212]). The First Emperor of Qin had a large enclosure, the Shang Lin, described by Ban Gu in his *Xi du fu* 西都賦 (Rhapsody on the Western Capital); see Schafer, "Hunting parks and animal enclosures in ancient China," 326 ff. M.E. Lewis, *Sanctioned Violence in Early China* (New York: State University of New York Press, 1990), 150–54, also discusses the hunting parks, Ban Gu's description of the First Emperor's park as a microcosm of the world, and other accounts of Han imperial hunting parks,see too his *Writing and Authority in Early China* (Albany: State University of New York Press, 1999). For Ban Gu's poem and other *fu* poems on imperial hunting, see Xiao Tong's *Wen Xuan, juan* 7, 8, and 9. On imperial hunting parks and post-Shang hunting park lore, see too Roel Sterckxs, *The Animal and the Daemon in Early China* (Albany: State University of New York Press, 2002), 111 ff.; Lothar Ledderose, "The Earthly Paradise: Religious Elements in Chinese Landscape Art," in Susan Bush and Christian Murck, eds., *Theories of the Arts in China* (Princeton: Princeton University Press, 1983), 165–83.

[515] See the references in the preceding note.

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kings would have seemed highly inappropriate for the imperial Son of Heaven. The emphasis on the cyclical observances of hunting rituals in such parks is indicative of an imperial ideology where the Son of Heaven was conceived as the mandated manager of the entire world, ruling it in all aspects, in accordance with the cycles of nature.[516] In my view, the evidence from the Shang displays an entirely different situation and worldview. In the imperial situation, the question is who should be emperor. In Shang times, because of the much more precarious existence of the royal polity itself, the question might be whether there would still be kings!

The enormous state structures of the empires, ruling tens of millions of people where the Shang had ruled (at most) a few hundred thousand,[517] seem hydra-like and once created, indestructible, in comparison with the fledgling, vulnerable Shang king and his incessant divinations on the topic of success or failure. Although universal imperial rule was never truly absolute, but also necessarily consisted in constant alliance-making and negotiation of unfolding events, the empires clearly differed greatly from the Shang. In the Shang world, the conquest of or victory over the wild animals (and the land they inhabited) was not a "fixed" game (definitely not so in the early part of the late Shang period), and most certainly did not take place in a hunting park. No wonder that the disintegration of "itinerant" Shang-style kingship was accompanied by both a decline in the relative importance of divination to rulers, in the use of animal bones as a medium, and by important changes of the place of animals in artistic representation, as well as by the emergence of minimalistic hunting confines!

The decline of divination using bone and shell did not mean that divination disappeared altogether, or became unimportant. But the role of divination changed dramatically. Whereas it had been a royal prerogative in the Shang and the early Zhou dynasty, it seems to have been taken up in all social strata during the later Zhou period. First, it became accepted (as related, for example in the *Zuozhuan* 左傳) for local lords to divine, and the appearance of written divination manuals such as the various versions of the *Yijing* 易經 in this period suggests that it then also had become desirable and acceptable for everyone to divine.[518] By that time, the Shang-style diviner-king using cattle shoulder blades and turtle shells inscribed with charges and records was no more,[519] and the change is thus related to both the decline and

[516] It is sometimes suggested (on the basis of oracle bone inscriptions describing the driving of animals from three directions, such as *Heji* 28789, III, cited under *zhu* above [3.2.2]) that the Shang shared the "sacrificial" ideology expressed in the *Liji* (op. cit., "Wang zhi," i.e. Legge 1885, trans.: II.25), prohibiting hunting in the breeding seasons of wild animals (see also note 296). But as noted above (3.2.5), there is little evidence that the Shang observed any such restraints. The ideology of observing nature's cycles seen in the *Liji* represents an imperial approach to the management of the world after it has been conquered. Such a goal was not conceivable in the world inhabited by the Shang hunter-kings.

[517] See Keightley, *The Ancestral Landscape*, 107 n. 33, citing estimates made by Song Zhenhao.

[518] Manuals may have been produced and spread precisely since it was no longer only ritual specialists such as those kept by the Shang king who made the divinations (E. Shaughnessy, personal communication).

[519] As several scholars have noted, later texts (late Zhou, Han or later) do not mention the oracle bone inscriptions of the Shang. This ignorance in itself suggests a rupture with the past, as well as of how Shang divination must have been a very restricted activity, confined to the court (the Shang court, as well as other courts such as the early Zhou, from which there also are divination records). (The decline may also have involved a decline in the use of plants, such as milfoil).

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finally (with the end of the Western Zhou) the disintegration of centralized kingship as known during the Shang and the Zhou. With the disuse of animals as media for divination, incipient kingship based in mediation of the "wild" also disappeared. In this regard there is, curiously, evidence that such natural media was once believed to have the power of fending off dangerous wild animals and poisonous plants: the chapter on the history of divination in the Han dynasty *Shiji* 史記 says that in Jiangnan 江南 area south of the Yangtze River, where tortoises serve as oracles and divinatory milfoil grows, "among the animals there are no tigers or wolves, and among the grasses, there are no poisonous weeds..."[520] (another powerful indication that the nature of the divinatory media, i.e. as *intermediary* between the domesticated and the wild, in itself helped master the threatening wildlife).

The disappearance of this intense relationship to the wild relates to the changes that occurred as the whole East Asian world was engulfed by imperial rule. Arbitration through divination and Shang-style itinerant challenge to the wild was no longer needed. The formation of large armies and improvements in weapons technology may have further accelerated the extermination of wild animals on the northern Chinese plains—to the point that in time, the imperial hunting parks probably very early on turned into refuges for the threatened fauna. The landscape evidently still teemed with wildlife in Shang times but successively became inhabited by not much more than the emperor and his subjects (plus the barbarians characteristically located beyond the pale of the realm): no wild life, only tame animals.

5.7 The Chinese archaic state and the hunter-king in comparative perspective

The tremendous potential for further investigation of the Shang royal hunt, using the perspective developed here on the emerging king as an arbiter-conqueror in motion, will help reveal more clearly a state-building device characteristic, if not crucial, to a family of social formations gathered under the name of "the archaic state." Proponents of various general theories of state formation have suggested different factors such as aggrandizement through trade, warfare, control over irrigation systems, etc. as the most important motivating factors behind the development of state polities, but there will always be many interacting factors, entering into play in a dynamic process.[521] The search for isolated "prime movers" in the complex

[520] Sima Qian, *Shiji*, chapter 128 ("Gui ce lie zhuan"), 3225 (note that this is recorded in the Han dynasty, i.e. long after the demise of the Shang).

[521] On "warfare" as a "prime mover", see R. Carneiro's classic paper, "A theory of the origin of the state," *Science* 169.3947 (1970), 733–38; and D. Webster, "Warfare and the evolution of the state. A re-consideration," *American Antiquity* 40 (1975), 464–70; and R. Cohen, "Warfare and state formation," in Claessen et al., eds., *Development and decline* (South Hadley: Bergin and Garvey, 1985), 276–89; for the role of trade and its control, see W. Rathje,"The origin and development of Classical Lowland Maya civilization," *American Antiquity* 36.3 (1971), 275–85; Sabloff et al., *Ancient civilization and trade* (Albuerque: University of New Mexico Press, 1975); for the control of irrigation systems as a key factor, see Karl Wittfogel, *Oriental Despotism: A Comparative Study of Total Power* (New Haven: Yale University Press, 1957). On social evolution see too Jonathan Friedman et al., eds., *The Evolution of Social Systems* (London: Duckworth, 1977), and Charles S. Spencer's review "On the tempo and mode of state formation: Neoevolutionism reconsidered," *Journal of Anthropological Archaeology* 9.1 (1990), 1–30. For more general discussions of state formation, often lacking attention to the role of the inseparably dynamic interplay of "symbolic" and "material" aspects as witnessed in the "royal hunt"—see, for example, Claessen and Skalnik, eds., *The Early State* (The Hague; New York: Mouton, 1978); and archaeological discussions

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processes of state formation has thus been largely abandoned, as a futile project. Nevertheless, the phenomenon of the royal hunt should be regarded as one highly important aspect. It is perhaps as a valuable window on the changes in the relationship between human society and the larger natural world within the larger processes of state formation that the study of the Shang royal hunt has its strongest appeal, and this is where the present study of incipient or archaic states in ancient East Asia connects with the larger, general project of attempting to understand the emergence of the state as such—that is, violence monopolies emerging where there were none before.

East Asia is conspicuously absent from much of the international scholarly discussion of state formation;[522] so is the royal hunt. Whenever the archaic Shang state is brought into comparative discussions, the concern often remains focused on the search for grounds for classification and definition (city state or territorial state, etc.), which risks underpinning essentialist assumptions that Shang "civilization" in its basic essential characteristics was static and unchanging—rather than seizing upon the transformational dynamics revealed in the royal hunt, and similar processes, and inserting the investigations of the Shang state into the study of state formation as socio-political transformation.[523]

There are actually a number of intriguing parallels worldwide to the royal hunt of the Shang, and to the sanitized imperial hunting of later periods in China. Comparative data abound on "hunting" as a close, nearly inseparable kin of "war," and in this capacity as a prominent tool of early state-building. Examples of aggrandizing kings seizing upon the hunt and using it for their own "higher" purposes can be found in ancient India, in the ancient Near East and the Mediterranean world, as well as also in the Americas, including in the pre-Inca Mochica culture of northern Peru.[524]

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such as Elizabeth Brumfiel et al, eds., *Specialization, Exchange, and Complex Societies* (Cambridge: Cambridge University Press, 1987), Henry T. Wright,"Toward an explanation of the origin of the state," in James N. Hill, ed., *Explanation of Prehistoric Change* (Albuquerque: University of New Mexico Press, 1977); "The evolution of civilizations," in D. Meltzer et al., eds., *American Archaeology Past and Future* (Washington: Smithsonian Institution Press, 1986), 323–365; also his paper in the recent collection edited by G.M. Feinman and J. Marcus, *Archaic States* (op. cit.). See too Jonathan Friedman's recently re-issued classic, *System, Structure and Contradiction in the Evolution of 'Asiatic' Social Formations* (Walnut Creek: Altamira Press, 1998), which includes highly interesting attempts at theorizing the use of "levers" such as slave-raiding in the evolution of social formation. Claude Meillassoux's *The Anthropology of Slavery* (Chicago: University of Chicago Press, 1991) discusses similar processes in the context of center-periphery interplay and in "secondary" state formations. The collection *Archaic States*, mentioned above, is a series of state-of-the art (1992) attempts dealing with "primary," or archaic, states.

522 See, as one example, Feinman and Marcus, eds., *Archaic states*.

523 For one recent, admirable effort to link the definition of the Shang state with general research in this field, which suffers from some of these problems, see Bruce G. Trigger, "Shang political organization: A comparative approach," *Journal of East Asian Archaeology* 1.1–4 (1999), 43–62.

524 A sampling of some of the most intriguing examples in the literature on this subject: On India, Francis Zimmermann's unparalleled *The Jungle and the Aroma of Meats* (Berkeley: University of California Press, 1987), esp. 58–62; 181–82; also Madelaine Biardeau and C. Malamoud, *Le sacrifice dans l'Inde ancienne* (Paris: Presses Universitaires de France, 1976), 94–5; Wendy Doniger O'Flaherty, *Other People's Myths: The Cave of Echoes* (New York: Macmillan, 1988); and J. M. MacKenzie, *The Empire of Nature: Hunting Conservation and British Imperialism* (Manchester: Manchester University Press, 1988). On ancient Egypt's potent hippopotamus hunts, see Torgny Säve-Söderbergh, *On Egyptian Representations of Hippopotamus Hunting as a Religious Motive* (Lund: Gleerup, 1953), and W. Decker, *Sports and Games in Ancient Egypt* (New Haven: Yale University Press, 1992), 147–58. On ancient Greece, apart from Xenophon's *Cynegeticus* and other hunting manuals, note Emily Ver-

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These significant parallels can help us relate the Shang phenomenon to the general problems of the emergence of kingship and archaic states as such. These emerging states, too, were largely dependent on agriculture, "already" in the midst of a process of devouring and annihilating the surrounding wilderness, leaving hunting behind as a source of everyday subsistence but often continuing and ritualizing it in ways not unlike the Shang royal obsession with hunting. The hunting of wild animals—and of those people that the archaic kings chose to designate as "wild" people, or barbarians—served as the means of incorporation and domestication of the entire range of living things, using the wild as a lever of state formation. Obviously, it was not just in East Asia that the state first rose from blood-stained fields.

meule, *Aspects of Death in Ancient Greece* (Berkeley: University of California Press, 1979) on hunting/war and sexual relations; also Pierre Vidal-Naquet, *The Black Hunter: Forms of Thought and Forms of Society in the Greek World* (Baltimore: Johns Hopkins University Press, 1983), 117–20; D.B. Hull, *Hounds and Hunting in Ancient Greece* (Chicago: University of Chicago Press, 1964); J.M. Barringer's *The Hunt in Ancient Greece* (Baltimore: Johns Hopkins University Press, 2001). On ancient Macedonia and Persia, see Pierre Briant, "Chasses royales macédoniennes et chasses royales perses: Le theme de la chasse au lion sur *La chasse de Vergina*," *Dialogues d'histoire ancienne* 17.1 (1991), 211–56, especially as regards Alexander's wartime hunts and hunting symbolism in imperial art. On Sassanid Persia, see Charles A. Reed, "Imperial Sassanian hunting of pig and fallow-deer and problems of survival of these animals today in Iran," *Postilla* 92 (1965), 3–23; and Margaret C. Root, *The King and Kingship in Achaemenid Art: Essays on the Creation of an Iconography of Empire* (Leiden: Diffusion/E.J. Brill, 1979). On imperial Rome above all Jacques Aymard's *Essai sur les chasses romains des origines à la fin du siècle des Antonins* (Cynegetica) (Paris: E. de Boccard, 1951), esp. 469 ff. On animal symbolism and hunting in the Mochica and other American early states, see, for example, Danièle Lavallé, *Les représentations animales dans la céramique Mochica* (Paris, Institut d'Ethnologie, 1970); also Garth Bawden, *The Moche* (Oxford: Blackwell, 1996); and R. Tom Zuidema, "The lion in the city: Royal systems of transition in Cuzco," in G. Urton, ed., *Animal Myths and Metaphors in South America* (Salt Lake City: University of Utah Press, 1985). —Finally, on the interrelationship of hunting rituals, power, and its psychology discussed here, we should also refer to more recent historical writing, such as Nicolas W. Proctor's tremendous book on the place of hunting in the master-slave relations in the Old South of the USA, *Bathed in Blood: Hunting and Mastery in the Old South* (Charlottesville and London: University Press of Virginia, 2002).

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Acknowledgments

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The inadequacies which remain are my own responsibility—which I hope to assume in the *BMFEA* spirit, embodied in the now-famous expression, "dialogue, not diatribe."

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Table 1. General overview of the distribution and use of the remains of wild and domestic animals and people in Shang archaeological contexts at Anyang. "Not found" indicates absence (barring new discoveries). Frequency is indicated roughly, as Not found, Rare/Exotic, Present (but frequency unknown), Occasional, or Frequent.

Species or type / Archaeological context	**"Ash" pits** (=waste or storage pits)	**Low-status burials** (Shang commoners)	**Medium-status burials** (Shang managers, aristocrats, etc.)	**High-status burials** (Shang kings & family)	**Sacrificial pits** (non-burial, separate from tombs)	**Chariot burials** (a special form of sacrificial pit)	**Bone & antler workshop sites**
Wild animals	Frequent, gen. fragmented, mix with domestic animals&humans	Not found	Not found	Not found	Not found, apart from exotic finds[1]	Not found	Only deer (along w cattle, a major material source)
Deer (possibly semi-domesticate)	Frequent, fragments and occasional skulls	Not found	Not found	Occasional antlers in tomb fill (?); in rare cases as offering	Not found	Not found	Frequent (antlers and bone)
Buffalo/wild cattle (possibly in process of domestication)	Frequent, fragments and occasional skulls	Not found	Not found	Occasional, in tomb fill (?)	Not found	Not found	Not found
Tiger & leopard	Yes, fragments, occasional skulls	Not found	Not found	Not found	Not found	Not found	Not found
Turtle	Frequent, as fragments—or caches of inscr. carapaces	Occasional fragments	Occasional; also (rarely) inscr. carapaces	Occasional, in tomb fill, etc.	Not found	Not found	Not found
Monkey	Not found	Not found	Not found	Occasional, incl. as companion of human offering	Occasional	Not found	Not found
Rodents	Present	Not found	Not found	Not found	Not found	Not found	Not found
Wild birds	Present	Not found	Not found	Not found	Rare[1], including as falconer/eagle hunter's tools	Not found	Not found
Fish	Present	Occasional	Not found	Not found	Not found	Not found	Not found?
Mollusc shells	Present	Occasional	Occasional	Occasional	Occasional	Occasional	Not found?
Whale	Exotic (once)[2]	Not found	Not found	Exotic[2]	Not found	Not found	Not found
Takin	Not found	Not found	Not found	Exotic (once)	Not found	Not found	Not found
Elephant	Exotic	Not found	Not found	Not found	Exotic, once, w. human caretaker	Not found	Not found? (ivory carving practiced)

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Type or species / Archaeological context	**"Ash" pits** (=waste or storage pits)	**Low-status burials** (of Shang commoners)	**Medium-status burials** (Shang managers aristocrats, etc.)	**High-status burials** (Shang kings & family)	**Sacrificial pits** (non-burial, or assoc. with high-status burials)	**Chariot burials** (a special form of sacrificial pit)	**Bone & antler workshop sites**
Humans *(in addition to the burials' main [Shang] occupants)*	Occasional (private slaves or servants/wives?)	Occasional (private slaves or servants/wives?)	Occasional (private slaves or servants/wives?; occasionally with weapons)	Large numbers, either intact or mutilated (i.e. enslaved 'Qiang' captives/slaves)	Large numbers, often mutilated (enslaved 'Qiang' captives/slaves)	Charioteers, buried with their horses and chariots	(Reported from beyond Anyang, at Zhengzhou, incl. human skulls)
Domestic animals	Frequent, often fragmented; mixed with wild animals and (occasionally) human remains	Frequent, and exclusive (i.e. never any wild animals, apart from turtle and fish remains)	Frequent, and exclusive (never with wild animals), plus humans	Frequent, and exclusive (neverwith wild animals), plus humans	Frequent; never with wild animals, often along with humans	Frequent, and exclusive (only horses and dogs)	Frequent, (selected species only, along with deer, also a major source)
Dog	Frequent, as fragments	Frequent (one or several whole animals)	Frequent (one or several whole animals)	Frequent (several, human guardians' companions)	Frequent as human companions; also exclusive pits, or mixed dog-sheep	Rare	Occasional (?)
Pig (mixed with wild boar?)	Frequent, as fragments	Occasional (incl. as limb offerings)	Occasional (incl. as limb offerings)	Occasional (incl. as limb offerings)	Frequent, incl. as whole-pig pits	Not found	Frequent (bone)
Cattle	Frequent, as fragments (and scapulae as oracle bones)	Occasional (incl. as limb offerings)	Occasional (incl. as limb offerings); also, rarely, inscr. scapulae (fragmented)	Occasional (incl. as limb offerings)	Frequent, incl. as whole-animal pits (NB: only cattle, never buffalo)	Not found	Frequent (bone and horns)
Sheep (or goat, generally not distinguished)	Frequent, as fragments	Occasional (incl. as limb offerings)	Occasional (incl. as limb offerings)	Occasional (incl. as limb offerings)	Frequent, but as mixed sheep-dog pits, only rarely as exclusive pits	Not found	Frequent (bone)
Chicken	Occasional, as fragments	Occasional, as partial offerings	Occasional, as partial offerings	Not found	Not found	Not found	Not found
Horse	Not found	Not found	Occasional, inassociated chariot burials	Occasional, whole animal as offering	Not found	Built for chariots & horses	Not found

1. One exception is the collections of exotic animals discovered at Xibeigang, perhaps royal "pet cemeteries," or a unique form of sacrificial pits.
2. Several different whale bones may have come from one single animal, thus the whale was a highly exotic import.

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Mapping "Ancient" Chinese Antarctica

by

Philippe Forêt

1. Introduction

Western mass media have granted a spiritual character to Antarctica and described the continent as offering much more to the travelers than an exotic landscape of floating icebergs and crazy penguins.[1] Antarctica provides a popular topic for introspective travelogues, science fiction novels, and accounts of British gallantry. More and more wealthy retirees, stamp collectors and mountain climbers travel there, but the continent and its islands have primarily remained the province of physical scientists.[2] An American geographer noted with pride in 1912 that Antarctica was "the stamping ground of explorers and scientists, and it would seem therefore as if scientific geographers had full sway and should crystallize Antarctic names in accordance with the claims of discovery."[3] The cartographic representation and the Chinese nomenclature of this stamping ground are what I am about to analyze.

Indian, Japanese, Korean, and Chinese researchers now interact in Antarctica with their colleagues from both Americas and Europe. The People's Republic of China since November 1984 has maintained two permanent bases in Antarctica, the Great Wall and Zhongshan research stations, which are located on King George Island and in the Larseman Hills on the mainland. Surveying, measuring, mapping and naming are obviously among the activities expected from polar researchers. We read for instance that Wuhan University experts surveyed Mt. Grove and mapped 120 square kilometers in January 2000. The team set up two Global Positioning System (GPS) stations and buried three Chinese bronze survey plaques on the mountain. It later published a large-scale topographical map.[4] The acts of mapping

[1] For example, see "Óscar Pinochet de la Barra, un diplomático en el reino de la luz," *La Epoca*, 22 December 1990, 40.

[2] Turistel-CTC, *Guia turistica de Chile. Sur 98, Chillán a la Antártica* (Santiago: Turismo y comunicaciones, 1997), 308.

[3] Edwin Swift Balch, "Antarctic Names," *Bulletin of the American Geographical Society* 44.8, 1912: 561.

[4] Xinhua News Agency, July 9, 2001.

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and establishing residence on the White Continent are manifestations of exclusive sovereignty by the nations involved in the race for scientific conquest in Antarctica. Aerial photographic survey, satellite imagery, the techniques of Global Positioning System and Geographical Information Sciences (GIS), are all employed to process and update an increasingly large amount of cartographical data. The analysis of the maps so produced can yield information on the geographical cultures of the countries that have built bases in Antarctica.[5]

One century ago, the nomenclature of the continent was seen as a major issue, which to be solved had "to be founded on truth and justice, since geography and history are simply records of things as they are or events which have happened. A proper Antarctic nomenclature must have its source in loyalty to humanity and to science, and not spring from servile obedience to national prejudices and national greed....Since the Antarctic regions...belong to the human race collectively, it seems self-evident that any names invented and applied to them...should be international."[6] We may have less naïve views on geography and history, but nomenclature remains an issue today. Place names given by cartographers are supposed to be either descriptive (like Elephant Island) or commemorative (like King George Island), but since no Chinese explorer or vessel is memorialized, it would seem that all Chinese toponyms are descriptive. This is not exactly true because the names chosen almost always refer to a landmark in China. They are therefore evocative and would form a new genre in the gazetteers of Antarctica. The Chinese maps of Antarctica display a nomenclature that is founded on verisimilitudes and place-loyalty, on the traditional school of Chinese geography, and on an uplifting vision of national history. This nomenclature excludes the names of Chinese emperors and admirals, but Chinese readers will find nonetheless that it expresses its national character without any ambiguity.[7]

I am investigating maps as landscape narrators to argue that they represent much more than the topography of the place. Cartographers manufacture power and, by extension, Chinese cartographers manufacture Chinese power. This argument has been made before by geographers but certainly not in the case of Chinese Antarctica.[8] The Chinese nomenclature there suggests metaphorical constructions of space that are related to the traditional school of Chinese geography known as

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[5] The two maps under consideration in this paper are:
A. *Zhongguo Nanji Changcheng zhan ditu. The Map of the Great Wall Station of China*, Zhonghua Renmin Gongheguo, guojia Nanji kaocha weiyuanhui, ed. (Beijing: Zhongguo ditu chubanshe, 1986). 1:1,000 scale (approximative).
B. *Isla Rey Jorge-Peninsula Fildes, Islas Shetland del Sur, XII Region de Magallanes y de la Antártica chilena, Republica de Chile*, Carta topográfica No. 2 Basa Presidente Eduardo Frei Montalva. Santiago: Instituto Geográfico Militar de Chile, 1996. 1:10,000 scale.

[6] Edwin Swift Balch, "Antarctic Names," *Bulletin of the American Geographical Society* 44.8, 1912, 561–62.

[7] With one exception, since Zhongshan station is named after Dr. Sun Yat-sen or Sun Zhongshan (1866–1925). Sun Yat-sen, fought the Qing dynasty (1644–1912), created the Guomindang (Nationalist) Party, took part in the 1911 revolution, and is considered as the father of the Chinese republic.

[8] Most notably by J.B. Harley, in "Maps, Knowledge and Power," in *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments*, ed. Denis Cosgrove and Stephen Danields (Cambridge: Cambridge University Press, 1988).

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fengshui or "geomancy."[9] To prove my point I have relied on two Chinese and Chilean maps that depict Fildes Peninsula at the southern end of King George Island (Isla Rey Jorge, península Fildes), in what Chileans call *Territorio Chileno Antártico* and Chinese *Zhongguo Nanji zhou*.[10] I compare the Chinese and Chilean surveys assuming that the map readership included not only scientists and cartographers but also the government officials who support campaigns in Antarctica and also the general public. I equate cartographic representation and environmental perception since the cartographic records of King George Island provide information on both, and I examine map names for what they suggest as much as what they display. I believe that the Chinese map of the Great Wall station makes references to the landscape paradigm of the imperial capitals of China, Hangzhou and Beijing especially.

2. The Geopolitical Context of an Island and a Continent

Despite its rigorous isolation, Antarctica has been affected by the same tensions between science, state and territory that have shaped the history of geography on other continents. Shortly after Pakistan and India became independent, the United Kingdom decided to continue in Antarctica the "Great Game" (in which British and Russians formerly opposed each other in Central Asia). The shift from the Tibetan plateau to the Antarctic plateau may not have been conceptually very challenging. The competition for the settling of the strategically located Antarctic peninsula (Tierra de O'Higgins on Chilean maps) and its offshore islands has become more acute as scientific bases have multiplied since the International Geophysical Year (IGY, 1957–58). During the IGY, a coordinated series of geophysical activities encompassed both poles. Despite the Cold War, researchers of sixty-seven countries worked together toward a scientific agenda that was non-nationalistic and apolitical. Shortly after, on December 1, 1959, the Antarctic Treaty was signed in Washington DC by Chile and eleven other countries, including Japan, but not China. The area covered by the Treaty extends from the South Pole to the 60th parallel South. By freezing all territorial claims, the Treaty has preserved Antarctica as a venue dedicated solely to peaceful purposes and cooperative scientific research. In the

[9] *Fengshui (fung shui* in Cantonese) is also called *kan yu* or *di li*, two names that better than *fengshui* indicate the importance of observation and modeling. The scholarly literature on this topic is vast. Ernest Eitel described the Chinese school of geomancy in *Fengshui: The Science of Sacred Landscape in Old China* in 1873. Andrew L. March reviewed the textual history of *fengshui* principles in an article, "An Appreciation of Chinese Geomancy," that the *Journal of Asian Studies* published in 1968 (vol. 27.2, 253–267). Stephan's Feuchtwang's thesis, *An Anthropological Analysis of Chinese Geomancy*, was published in 1974. Geographers have enjoyed reading Ronald G. Knapp's many books on geomancy and the traditional landscape of rural China: *China's Vernacular Architecture: House, Form and Culture* (1989), *Chinese landscapes: The Village as Place* (1992), *China's Living Houses. Folk Beliefs, Symbols, and Household Ornamentation* (1999), and *China's Old Dwellings* (2000). The best introduction to Chinese geomancy I am aware of is in French: *Fengshui: L'art d'habiter la terre*, by Frédéric Obringer (Editions Philippe Picquier, 2001).

[10] The national maps of Chile always include a map of the "Territorio Chileno Antártico" in a separate box as well as a disclaimer on the national boundaries: "La edición y circulación de mapas, cartas geográficas u otros impresos y documentos que se refieran o relacionen con los límites y fronteras de Chile, no comprometen en modo alguno al Estado de Chile, de acuerdo con el Art. 2°, letra g) del DFL N°83 de 1979 del Ministerio de Relaciones Exteriores." It would seem that this disclaimer is required by the Dirección Nacional de Fronteras y Límites del Estado, which is the agency that authorizes map circulation in Chile.

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1980s and 1990s, several protocols and conventions have modernized the Treaty and sought better to protect the environment and ecosystems of the Antarctic continent and ocean. Forty years after the signature of the Antarctic Treaty, forty-three countries have subscribed to its clauses, and twenty-six (including both Chile and China) have acquired a right to vote.[11]

For much of the 20th century the nationalist discourse on Antarctica has employed a rhetoric that merged the determinism of geopolitical arguments with the rewriting of the history of continent. In the 1940s, nationalist columnists in Chile perceived the presence in Antarctica of non-American bases as a denial of the principle of "America for Americans."[12] Countries like the United Kingdom, France, and the Soviet Union were accused of not recognizing the political maturity and legitimate rights of the Latin American nations. The Falklands, the French and British Guyanas, and other European exclaves in America and Antarctica were seen as strategic threats directed toward the heart of the Western hemisphere. These possessions violated the fundamental principle of Pan-Americanism and ignored the laws of historical cycles and geographical continuity. Some commentators argued that the old imperialist powers of Europe were in decline and should not prevent the younger nations of America from establishing themselves in Antarctica. European bases, located on the Antarctic prolongation of the American soil, were clearly undesirable in this geopolitical context.

Through the *bulle* of 1493, Pope Alexander VI awarded America along with western Antarctica to the Catholic Kings of Spain. The governors of Chile appointed by Madrid administered also the *terras australis*, since whatever was south of the Magellan straits belonged to the Spanish Crown. Chile inherited Spain's claims in Antarctica, and with them frictions with other countries that had discovered and occupied parts of the coasts and islands of the continent, most notably Argentina, the United Kingdom, Australia, New Zealand, France, and Norway. A Supreme Decree, signed on November 6 1940, created Chilean Antarctica, an entity that the Chilean government saw in agreement with historical precedents and the geographic continuity of Antarctica and Tierra del Fuego. The area claimed by the Republic of Chile has been administered as part of the XIIth region, the "Region de Magallanes y de la Antártica Chilena." The capital of Chilean Antarctica is the naval settlement of Puerto Williams, on the Beagle Channel of Tierra del Fuego and about 1,200 kilometers north from King George Island. Following the first expedition to Antarctica, in early 1947, Chile has built a network of bases and refuges. This small country now supports three permanent bases, a meteorological center, an airport and a civil settlement.[13]

Public statements have been made on a regular basis on the consolidation of the Chilean sovereignty in Antarctica, on the improvement of the Chilean position

[11] The Antarctic Treaty's Fourth Article is the one that would matter most for Chilean and Chinese diplomats: "Ninguna disposición del presente tratado se interpretará como una renuncia, por cualquiera des las partes contratantes, a sus derechos de soberania territorial."

[12] Rafael Di Domenico, "¿Existe realmente el problema antártico?" *La voz de un escritor*, 84–85.

[13] For a touristic description of Chilean Antarctica please consult: "Zona 15, Territorio Chileno Antártico," in Turistel-CTC, *Guia turistica de Chile. Sur 98, Chillán a la Antártica*, (Santiago: Turismo y communicaciones, 1997), 302–308. The map of the territory seems to be based on a National Geographic Society map of 1987, but the original map was altered to accommodate Chilean political claims.

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within the Antarctic Treaty system, and on the dangers that the internationalization of Antarctica has created for Chilean sovereignty rights. Today's discourse on the Antarctic vocation of democratic Chile, as presented by diplomats such as Óscar Pinochet de la Barra, the director of the Chilean Institute on Antarctica (INACh), appears to be more accommodating than fifty years ago. Thanks to the conviviality of the "Antarctic spirit," Antarctica has been called the most imaginative political project of the second part of the 20th century.[14] Nevertheless, Chile feels it has a unique responsibility in the co-administration and humanization of the continent. Antarctica is a New World, just like America was five centuries ago, that man is exploring and which science is converting into a symbol of environmental purity. In addition, the belief that further south lays a big mass of Chilean frozen water was a comforting thought to all those who had endured severe drought cycles in Santiago.[15]

It would seem that most members of the Antarctic Treaty use science as a pretext to mark their presence and pursue political agendas. The justification for station building lies in the infrastructure needs of the scientists who have investigated Antarctica's physical environment. The scientific community has always assumed that its activities could remain free from cultural and political constraints; that it would have an insignificant impact on the Antarctic environment but yield a tremendous benefit for the rest of the planet's well-being. The concentration of scientific stations, mostly located between Drake Passage and Weddell Sea, nevertheless casts a doubt on the originality of the research done in only a few islands.

One of the major South Shetland Islands, King George Island, is centrally located between Drake Passage and the northern extreme of the Antarctic peninsula.[16] The island's approximate latitudinal and longitudinal location is 62 degrees South and 59 degrees West. A glacier covers most of the island, except for the fifty square kilometer large Fildes Peninsula where the Chilean and Chinese bases are located. The Great Wall station (Changchengzhan in Chinese or Base Gran Muralla in Spanish) is situated near the bases built for the Chilean institute of polar research.[17] A three-kilometer long coastal road links the airport, the Professor Julio Escudero base, the Presidente Eduardo Frei Montalva base, and the Great Wall base. King George Island has harbored a concentration of scientific communities that is the nationally most diverse of Antarctica. The Russian, Argentine, Uruguayan, Brazilian, Korean and Polish stations are all north of the Chilean bases, between the edges of the central glacier and the eastern coast. In 1987, the leader of the Chilean Thirteenth Expedition, Patricio Eberhard Burgos, toured the King George Island

[14] Lucia Ramirez A., "Óscar Pinochet de la Barra," *Boletín Antártico Chileno* 2 (1996), 15–16.

[15] "Óscar Pinochet de la Barra, director del Instituto Chileno Antártico: Abrazo de Frei y Menem marcará un hito," *La Tercera*, 15 June 1998, 3.

[16] On the strategic location of King George Island and the supposed geopolitical significance of Antarctica for Chile, see: "Programa científico desarrollado en la Antártica, verano 1983," *Boletín Antártico Chileno*, 3.6, 1983, 3, and "Mapa de ubicación de la isla Rey Jorge en las islas Shetland del Sur," *Boletín Antártico Chileno*, 4.2, 1984, 2. Two other maps on the area covered by the Antarctic Treaty were made by Allan Daile C. of the Universidad Católica de Chile, and have quite suggestive projections: (Untitled), *Boletín Antártico Chileno*, 4.2, 1984, 15, and "Perspectiva Antártica," *Boletín Antártico Chileno*, 5.2, 1985, 11.

[17] The Chilean Antarctic Institute (INACh: Instituto Antártico Chileno) is supervised by the Ministry of Foreign Affairs (Ministerio de Relaciones Exteriores) of the Chilean Republic. For information on the research institute, see: http://www.INACh.cl/.

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settlements as an observer. He visited ten stations belonging to eight different nations between January 15, 1987 and February 22, 1987. His report describes the base infrastructures and raises questions about research duplications and the relative overcrowding of King George Island. However, the analysis of environmental changes and the study of new human landscapes were outside the scope of his report.[18]

Over time, the cluster of the Chilean facilities on King George Island has become relatively complex, administratively speaking. The INACh manages the Prof. Julio Escudero Base, while the Chilean air force administers the Presidente Eduardo Frei Montalva base and Teniente Marsh base. The meteorological center of the Antarctic peninsula and islands is located at the Presidente Frei station. In order to materialize colonization plans a family community called Villa Las Estrellas was built on the Teniente Marsh Base of the Chilean air force. By 1990, fourteen Chilean families were living there, busy at peopling the continent. The Chilean bases offer many services to the multinational population of King George Island: a school, a church, a greenhouse, a clinic, a post office, a hotel, public phones, a small mall, the programs of Radio Soberanía station, a bar for betting on Chilean soccer teams, and a branch of the Banco de Crédito e Inversiones.

3. Chinese Presence in Insular Antarctica

China's scientific achievements in Antarctica have contributed to enhancing the international status of the PRC, a full consultative member of the Antarctic Treaty. The Chinese navy is able to sail to Antarctica, 17,000 kilometers away, and logistically support permanent stations in a hostile environment. Scientific programs in Antarctica are part of the national five-year plans of the People's Republic of China, which would indicate that the research agendas are determined by the central authorities. The still unwritten history of Chinese Antarctica mostly consists of newspaper headlines, congratulation messages from the Chinese government, and technical reports that remind us of the nature of the links that have existed between physical sciences and state machinery.[19] As far as I know, the Chinese archives related to the establishment of the country's two research stations and the dispatch of yearly expeditions are not open to foreign scholars, even if the Treaty states that programs plans and observation results must be freely exchanged.[20] The activities of China in Antarctica have remained relatively secret and vague maybe because lack of transparency serves diplomacy best. Beijing does not want to antagonize claimant nations and prefers for the moment a consensual approach to the debate on the future exploitation of the region resources. Beijing may also have become aware that the international community is concerned with China's careless attitude toward the environment, at home as well as in Antarctica.

[18] The report Eberhard wrote was published by the Instituto Antártico Chileno in its journal *Presencia de Chile en la Antártica, XIII Expedicion 1986–87*, Vol. XII, 1987. The introduction of the report summarizes the purpose and results of such inspection tours.

[19] Personal communication from Daniel Torres Navarro, Director of the Scientific Department of INACh, Providencia, June 9, 1999. The interpretation of the history of Sino-Chilean interaction is mine only.

[20] Wei-chin Lee, "China and Antarctica. So Far and Yet So Near," *Asian Survey* 30.4 (1990), 578.

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China's research activities began during the 1979/1980 season, at the very beginning of the Deng Xiaoping era (1978–1997), when two scientists were invited to Davis station, in Australian Antarctica. A National Antarctic Research Committee was set up in 1981; two years later, the Chinese representative at the Treaty's twelfth Consultative Meeting declared that the People's Republic of China wanted to work with other countries "to bring about a speedy development of scientific investigation in Antarctica."[21] Following talks with Chile on oceanic and geological surveys, the INACh received an invitation to tour Beijing, Shanghai, Hangzhou and other scenic places in China in 1982. The Chilean guests were introduced to the work done by Chinese oceanographers and environmentalists. A few months later, a Chinese scientist landed on King George Island, thanks to a courtesy flight of the Chilean air force. This was the beginning of an association between Chinese and Chileans that resulted in the building of the first Chinese research station in Antarctica. Collaboration between the Chinese and Chilean bases has been largely informal and limited to solving logistical issues on King George Island: the Chileans operate an airport while the Chinese own a floating crane and the largest vessel in the area. In terms of actual research, Chilean and Chinese projects may accidentally overlap but formal efforts at program pre-coordination have remained rare.[22]

Two Chinese researchers interested in lichens and sea mammals succeeded the unnamed Chinese scientist who first stayed in Chilean Antarctica in 1982. They were looking for a location for China's permanent research station. Wu Baoling and Deng Jinghai, accompanied by Daniel Torres Navarro of the Scientific Department of the INACh institute, toured the eastern and southern coasts of Fildes Peninsula on King George Island in 1984. The Chinese party did not retain the site that the Chilean proposed because leaking fuel tanks had polluted its source of drinkable water, the Laguna Langer. On February 20, 1985, the First Chinese Expedition to Antarctica inaugurated the Great Wall station (Changcheng zhan), which had been built within weeks further south of the first site and west of Xihu Lake, the first lake in Antarctica to receive a Chinese name. The base is located at the southwestern tip of King George Island and close to Nelson Island, not far from Chilean and Russian stations—which remained unacknowledged in the Chinese sources of 1985.

Also in February 1985, the Chilean air force issued a cordial invitation to the director and assistant director of China's Committee of Exploration of Antarctica. The Chinese delegation flew to Antarctica in the company of the Chilean Director of the Administrative Department of the Ministry of Foreign Relations and security personnel. They inspected the construction site of the new base. The Chinese officials may have accepted the involvement of the Chilean air force partly out of convenience and partly because they were not charged for transportation. But the Chinese first had to land in Chile and solicit a visa for doing so, which implied the recognition of Chilean sovereignty on King George Island. This point seems to have escaped the attention of the Chinese mission members, although a public statement by a Chinese official upon his return from King George Island implied an unwilling-

[21] Ibid.

[22] Patricio Eberhard Burgos, "Informe del observador de Chile en la Antártica, Periodo 1986–1987, de acuerdo al articulo VII del Tratado Antártico," *Presencia de Chile en la Antártica, XIII Expedicion 1986–87*, Vol. XII, 19–21.

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ness to admit the existence of the Territorio Chileno Antártico. The Chilean scientists who hosted the Chinese mission were aware of the Chinese reservation since they later quoted it.[23]

The following austral summer, in January 1986, three astrophysicists from Peking and Nanjing universities went to Antarctica to study the Halley comet. The same month, two high school students from Beijing and Shanghai boarded a Chilean plane to fly to King George Island. As Young Pioneers, they had been chosen by the Chinese communist youth organization to affix a bronze plate at the Great Wall base. A penguin and a panda bear decorate the text of the plate they carried with them. The 1985/1986 and 1986/1987 expeditions improved somehow the base infrastructures. In August 1988, Zhu Qizhen and Ernesto Videla Cifuentes, both vice-ministers of external relations, signed a *Memorandum of Understanding*, but the Sino-Chilean memorandum has not resulted in a formal agreement or in a joint research program. The only collaborative effort took place in 1993–1994, when Chilean and Chinese paleontologists teamed up and a Chilean scientist was invited to attend a conference in China. Without Chilean assistance, China established a second station on the coast of the Antarctic mainland inside the polar circle in February 1989. On November 1, 1995, Reuters reported that Beijing would send fifteen Young Pioneers to the Great Wall station for a seven to ten day research project. Teenagers from Mainland China, Hong Kong, Taiwan and Macao were welcome to apply. Several Chinese enterprises reportedly gave US $480,000 to finance the program that the Young Pioneers organisation (*Hongxiaobing*) presented as the first of its kind in the world.

The description of China's seventh expedition to Antarctica by Sun Wensheng, which was published in the September 2001 issue of *China Pictorial*, reveals the conflations of nationalism, science, modernity and history. Sun Wensheng was "deeply moved...by the enchanting scenery" as he admired "the glittering ice floating on the sea and the icebergs and snowy peaks in the distance." He emphasized the virgin nature of the spot, describing the area as "fresh, harmonious, unsophisticated, and uncivilized, as if we were standing in the remote past of mankind." In this unspoiled area, the functional Great Wall station allowed high-level science and offered modern comfort. He remarked that "all the buildings stand on sites named after places in China, such as Pingding Mountain and Guishan Mountain." As he left Antarctica, Sun Wensheng felt national pride at the conquest of "a snow-covered world," in which "a five-star flag was rising to the accompaniment of the Chinese national anthem."

4. The Making of Chinese Antarctica

While the pristine environment of King George Island has changed in twenty years, the Chinese commitment to research in Antarctica has remained remarkably con-

[23] Chen Hongsheng's statement that "La Antártica es el único continente donde no existen fronteras en el mundo de hoy" *(Beijing Informa*, February 1985) was quoted in "Amistad en la exploracion antártica," *Boletin Antártico Chileno*, 6.1, 87. The Chinese statement directly conflicts with the position defended by Chilean maps since they represent as Chilean a sector of Antarctica that extends from the 53°W to the 90°W and from the 60°S to the South pole. This sector is delineated by an international boundary on Chilean maps.

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stant. This sustained policy resulted in China being promoted to the rank of a non-claimant consulting member of the Antarctic Treaty on October 10, 1985. China was present during the discussions that led to the Protocol on Environmental Protection to the Antarctic Treaty in 1991 and approved it in 1994, although its position on the Protocol's specific annexes is unclear. The People's Republic of China has been anxious to demonstrate that Chinese scientists participate actively in the research done on Antarctica. The yearly expeditions of CHINARE, the Chinese Antarctic Research Expedition, have been centered on the Great Wall and Zhongshan stations. At the local level, research has been conducted on the volcanic and sedimentary profiles of the South Shetland Islands and the mesa Cenozoic paleontology of the islands.

Since its establishment the Chinese National Committee for Antarctic Research has published the yearly reports that the Antarctic Treaty requires from all its signatories. The Chinese Antarctic Administration and the Polar Research Institute of China are the institutional authors of the *Summary of China's Antarctic Scientific Research Report to SCAR* (the Scientific Committee on Antarctic Research) series. The reports describe the technicalities of scientific activities. The selection and methodology of research projects receive only brief explanations.[24] The activities of the staff of the two Chinese research stations in Antarctica are documented in other academic journals, such as the *Jidi yanjiu*, which continues the *Nanji yanjiu*, a quarterly that was established in March 1988. Both are also published in English (*Antarctic Research* was renamed *Chinese Journal of Polar Science* in 1997). The journal sponsored by the Polar Research Institute of China under the supervision of the Antarctic Survey Administrative Office of the National Maritime Agency of China (Guojia haiyang ju Nanji kaocha bangonghui). The index of the *Jidi yanjiu* may give an idea of the relative importance of the fields of research where China is active: geology, environmental science, geochemistry and biology would be the most important areas of investigation in Chinese Antarctica.

Practical interest in cartographic research and mapping is also strong. In March 1999, the Chinese Antarctic administration announced its interest in conducting alone a GIS project on King George Island. The Larsemann Hills of the Zhongshan station were mapped as well as the plateau behind the station. A continental-scale mapping project was concluded recently, and Chinese maps of Antarctica are now being advertised for sale. The 1999 collection of Chinese maps of Antarctica include two maps series of Antarctica, topographic and geological, at the 1:6,000,000 and 1:5,000,000 scales, maps of the Antarctic ocean, of the Antarctic frozen seas, maps of the Great Wall and Zhongshan stations, and topographic and geological maps of Fildes Peninsula. The Great Wall station and Zhongshan station participated in the SCAR Epoch Global Positioning System campaigns during summer 2000/2001 and summer 2001/2002. The Chinese Antarctic Center processed the GPS data of seven stations in the Antarctic peninsula. Future plans call for the improvement of the

[24] The creation of a place name gazetteer in Chinese and a Chinese GIS database of Antarctica are thus described: "We have solved the problem of gazetting Antarctic geographic place names in Chinese in the standard way. We also make preparations for establishing an Antarctic GIS Data Base of China." *Summary of China's Antarctic Scientific Research. Report to SCAR*, August 1994. Other Activities, Point 7. How the problem was solved and why this was seen as problem are issues that are not discussed.

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geographic information database of Antarctica and the revision of the topographic maps of the Great Wall station and Zhongshan station. In the Grove Mountain area, twenty places received Chinese names that were submitted to the National Committee for Naming Antarctic Features.[25] It is certainly not by accident that the Chinese Antarctic Administration took the initiative to publish a *Manual of Place Names of the Antarctica* (title in Chinese unknown). By assuming an active role in the mapping of Antarctica, the Chinese can put a lasting imprint on the continent.

5. Cartocontroversy on King George Island

The five-star flag of China would thus dispute a crowded island to the one-star flag of Chile. What I call "cartocontroversy" is a conflict indicated by inconsistencies or silences that become evident when we compare two maps of the same locale.[26] Cartocontroversy does not need to be explicitly acknowledged by the cartographer or understood by the observer. The map-reader may understand that there is an intention in these discrepancies, without imputing the coherence of the map representation to the cartographers' intentions. The Chilean and Chinese schools of cartography only indirectly produce the discrepancies found in the maps made independently in Beijing and Santiago. I am of course abandoning the notion of maps as objective representations in order to situate the notions of map coherence and discrepancies within a specific cultural context. Examining the coherence of the visual records substantiates a case of cartocontroversy, since the discrepancies that result from map production might be construed as the visual elements of opposite ideological agendas.

Comparing the Chilean and Chinese maps of the Great Wall base and the Presidente Eduardo Frei Montalva base reveals a number of contradictions and silences that deserve an explanation. For instance, the Chinese map does not include information on the Chilean presence on the peninsula. This is surprising because Chinese scientists were fully aware of the Chilean maps of the area since they had to use them to prepare their landing. Aerial pictures of Fildes Peninsula had indeed been taken by the photogrametric Service of the Chilean air force in 1983–84, the year before the Chinese arrival. On the other hand, the Chilean map, which was updated in 1996, identifies and names most of the features of the site of the Chinese base. Only two Chinese place names are translated into Spanish (colina Dragón frio and Gran Muralla); the other place names are given in transliterated *pinyin* Chinese (Wang Long Yan, for instance).

The Chilean cartographer has added a Chinese name to the only feature that already had been named in a different language (Isla Catedral or Guijan) but he misspelled it: Guijan instead of Guishan. Twice the cartographer repeats a spelling

[25] E. Dongchen "Report of Current Activities of China for 2000–2002," *SCAR XXVII, National Report of China*, Shanghai, July 14–19, 2002. http://www.geoscience.scar.org/meetings/shanghai/china.pdf.

[26] The concept of cartocontroversy has been studied by Mark Monmonier in *Drawing the Line: Tales of Maps and Cartocontroversy* (New York: Henry Holt and Company, 1995). Monmonier discussed in his book disputes over how to name places and physical features. He explored the ways maps are used to control, influence and symbolize.

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mistake: "Shanhaicuan," instead of Shanhaiguan. Such mistakes may reveal the ignorance of the meaning of the place in Chinese. Part of Maxwell Bay has been rebaptized "Bahía Gran Muralla China" north of Isla Catedral, but the bay has kept its previous name south of the island, "Bahía Maxwell." Two Chinese-sounding capes, Dong Chen and Wuhan, now delineate the entrance to Bahía Maxwell from the Bransfield Strait. Further west, across Fildes Peninsula, we note the presence of a Shimen peninsula and a Huangshi hill, which with its 123 meters dominates, so to speak, the Laguna Geógrafos. Some Chinese toponyms, especially those that are the closest to the Great Wall base, are missing from the Chilean map.

We may safely assume that these Chinese place names, especially since they are transliterated, do not have any emotional connotations for the Chilean readers of this map of Fildes Peninsula. After all, how many technicians and scientists of the INACh laboratories and stations would appreciate the cultural meaning of the Chinese place names? Moreover, Chinese readers may remain indifferent to the place names transliterated from the Chinese characters on the Chilean map. They would not know with certainty which transliteration stands for which character since the Chinese language has a large number of homophones. However, the Chinese toponyms of King George Island are of crucial importance for the perception of the site of the Great Wall station and the understanding of the political ambitions of China in Chilean Antarctica. These names have rich emotional resonance, but their potential to recreate a cultural landscape would be evident only to the Chinese expedition members, sponsoring agencies, and, implicitly, readers literate in Chinese.

6. The Cultural Landscape of the Great Wall Station

The Chinese Communist Party Central Committee and the State Council of the People's Republic of China endorsed China's first expedition to Antarctica in 1984/1985. Deng Xiaoping himself offered a plaque to the expedition members that had as its inspirational inscription: "Toward the Peaceful Utilization of Antarctica by Humanity." For the first hoisting of the Chinese flag in Antarctica, Guo Kun, the expedition leader, chose a hilly place, with lagoons open to the sea at high tide. Along the coast of what he described as a green oasis, the rich biotope of the lagoons promised convenient research topics—unfortunately, these lagoons had mysteriously disappeared by 1996. The construction of a base in a an area that had no previous cultural imprint, according to Chinese sources, is an event impossible to observe in China since this country has had such a long history. The Great Wall station thus constitutes a unique opportunity to observe landscape sinicization in action—the cultural values about space that an all-male team of Chinese scientists has transplanted outside the Chinese realm. In the originally neutral environment of King George Island, these values about place and space are indeed easy to notice and analyze. But what are these values that have given a Chinese meaning to the site of the Great Wall station?

Expediency and nationalism were the guiding factors in the construction of the Great Wall station. The design and layout of the station were defined after examination of how countries with polar experience built and ran their bases. New Zea-

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land provided expertise for construction and management, and Chinese scientists discussed practical details with Chilean and Argentine colleagues on King George Island. Building insulation, fire hazard, water supply, a landing site, road access, and garbage disposal were among the conversation topics. Knowing which factors were the most important ones in the founding of the station is not an easy task if Chinese records are not available. I suspect that the naming potential of the southernmost part of the island was an attractive consideration that may not have been discussed with outsiders. On the other hand, interest in the actual natural environment was openly expressed, and in lyric terms. Chinese scientists were not especially interested in making statements on socialist architecture and modern Chinese city planning.

According to Guo Kun, the very first task of the expedition was the naming of the features of the settlement, as if giving Chinese names to the lake, bay, and hills around the station were prerequisites to turn the virgin site into a sustainable environment.[27] The Chinese place names on King George Island fall into three functional categories:

I. Names and concepts translated from foreign languages:

Nanji: South Pole; Nanzhou: South Continent (Antarctica); Dizhixuejia dao: Geologist Island. Well before the actual mapping of the coasts of Antarctica began, in 1602, Father Matteo Ricci introduced the notion of an austral continent to Chinese geographers in his *Kunyu wanguo quantu* map, which was then called Nanzhou, the South Continent. *Wanguo quantu*, a map similar to Ricci's, was made soon after in Hangzhou in 1623. Its author, Giulio Aleni, depicted a vast but empty austral continent that extended northward to Java and was called Magellanica.[28]

II. Names transliterated from foreign languages:

Fei'erdesi bandao: Fildes Peninsula; Adelei dao: Ardley Island. The transliteration of foreign place names has a long tradition in Chinese geography. Reverse transcription into the Latin alphabet of foreign names transliterated into Chinese may unsurprisingly lead to mistakes: the Frei base may then become the "Ferry" base and Fildes Peninsula is called "Fields." Western scientific concepts are never transliterated into Chinese—in this respect Chinese is markedly different from Japanese, which willingly uses its *katakana* system to transliterate the concepts, tools and techniques developed in Europe and America.

III. Chinese place names, which, if recognized by the international community, may appear on international maps in transliteration or translation:

Changcheng zhan: The Great Wall base, Zhongshan base: Sun Yat-sen base (if translated), Xihu: Western Lake, Shanhaiguan: the easternmost Great Wall pass between

[27] *Beijing Review* 28.24, 17 June 1985, 25–28.

[28] Eugenio Menegon, *Un solo Cielo. Giulio Aleni S.J. (1582–1649), geografia, arte, scienza, religione dall'Europa alla China* (Brescia: Grafo edizioni, 1994), 38–39 and 40. The *Wanguo quantu* map was published in *Zhifang waiji*. For a short history of Chinese world maps and the encounter with European cartography, see Richard J. Smith, *Chinese Maps* (Hong Kong: Oxford University Press, 1996).

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Manchuria and the North China plain, Shuangfeng dao: Two Summit Island (on the Chinese map, and Islas dos Morros on the Chilean map).

The Chinese place names found on King George Island belong to several semantic registers within the third category. Most toponyms are actually members of at least two of the following registers:

- IIIa. Geographical names that describe the aspect or the location of physical features: Pingding shan or Flat Summit Mountain, Xihu or Western Lake.
- IIIb. Geographical names that have a historical and patriotic significance: scenic Xihu or Western Lake is the famous lake that lies west of Hangzhou. Its shape has been a model of inspiration in landscape architecture. Hangzhou was the wealthy capital city of the Song dynasty that desperately resisted the Mongol invasion. Lake Xihu or Laguna Gran Muralla in Spanish is the name of the lake directly west of the Great Wall station. The Great Wall of China, this wonder of military architecture that failed to protect China from incursion and conquest by Central Asian dynasties, generated several toponyms on King George Island: the station itself, the bay, one lake and two hills, Shanhaiguan and Badaling, now continue in Antarctica the 5,000 kilometers of the Great Wall of China. The restored Great Wall gates of Badaling and Shanhaiguan are among the most visited tourist places around Beijing.
- IIIc. Geomantic place names that have a significance in the traditional sense of place (*fengtu* in Chinese) in China: Pingding shan, Xi shanbao, Qifeng yan, Wanglong yan, and the hill and island of Guishan (Isla Catedral). I would include Dragón frio Hill (Cold Dragon Hill) that is present on the Chilean map but not on the Chinese one. I am here speaking about the terms used in geomancy (*fengshui* in Chinese) that have contributed to the creation of relationship between the site of the base and the base community.

These geomantic toponyms form a semiological network that associates a systematic analysis of the physical site, the configuration of the natural elements of the site, and the location and shape of the human elements introduced to the site (such as: wharf, flag pole, antennas, buildings and roads, water pipes and sewer lines, fuel tanks). "Geomancy," concisely defined, is the art of placing man-made features within the natural environment. The aim of geomancy is to locate propitious sites in order to protect local settlements from evil influences. Geomancy reveals processes of cosmic forces as they are moving through the landscape. One implication of the interpretation of geomantic space is the idea that disturbances in the environment may disturb the delicate balance between community and nature to the point that the sustainability of the community is threatened.

7. The Metaphorical Landscape of Fildes Peninsula

Toponyms with historical, patriotic and geomantic meanings bring immediately to mind ancient China's values related to locale. The set of references is evident enough: the Great Wall of Antarctica is the Great Wall of China, the Shanhaiguan

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of King George Island is the Shanhaiguan that protects Beijing, etc. Two other systems of landscape values may be less visible to the Western (Chilean in this case) observer: the geomantic and metonymic systems of references. The alignment of Nesting Phoenix Cape (Qifeng yan), West Mountain Embrace (Xishan bao), the Great Wall gate of Badaling, and Watching Dragon Cape (Wanglong yan) protects the geomantic site of the station east of Western Lake. Flat Summit forms the rear barrier hill, west of the station, and is attended by Watching Dragon in the south and Nesting Phoenix in the north. Finally, the flagpole is located on a east-west axis that we can trace from Flat Summit to the mouth of the creek that drains Western Lake. Opposite to the east-facing base lies Guishan Island that closes this geomantic site. The axis bisects the site in two equal halves; buildings and infrastructures are built on both sides of the axis. Perhaps because of the association of Flat Summit's shape to the shape of a Jupiter hill and therefore, according to geomancy, to the Wood element, the oil depots of the station have been symmetrically located as far away as possible from the station and symmetrically on both sides of the axis. The presence of Wood implies of course a fire hazard. The Chilean map confirms this interpretation by showing that fuel tanks are placed close to the Fire Cape (Huo yan), under the protection of Watching Dragon Cape.

I will now suggest a homology between the Great Wall station and imperial Hangzhou. Located near the garden cities of the Grand Canal, Hangzhou is one of the major sites of reference for Chinese landscape architecture.[29] In the austral hemisphere the observer must face north in order to watch our sun. As a rule, Chinese cities always face the equator line, and, conversely, if China were south of the equator, we would assume that its cities would face north. The only remarkable exception to the geometric rule of cardinal orientation (illustrated by the imperial capitals of Beijing, Kaifeng and Xi'an) is Hangzhou, the Southern Song dynasty's capital city. Because of relief constraints, Hangzhou was exempted from several geomantic rules. Maps of the city were actually reoriented with south on top to give the appearance that urban planners had respected geomantic canons by placing the imperial palace in the northern part of the city. Such practices are useful reminders of the argumentative nature of geomancy, which is a discourse that justifies building and siting decisions but which remains open to further interpretations. We therefore need to mirror the map of the station to compare the site configuration of the Great Wall station with the site of Hangzhou. This new mental map shows a settlement that develops in a South-North direction, a body of water that follows a Southwest-Northeast direction and, surrounded by hills on three sides, a lake west of the settlement while a river or a bay lies east of the settlement. The maps of both the base and the imperial city depict the same site configuration. The location and the orientation

[29] Under the name of Xingzai (Quinsai), 13th-century Hangzhou was the most populous and luxurious city in the world. Marco Polo called it "the most noble city and the best that is in the world" because, there, "so many pleasures may be found that one fancies to be in Paradise." In his now classic *Daily Life in China on the Eve of the Mongol Invasion, 1250–1276* (Stanford: Stanford University Press, 1962), Jacques Gernet provides a fascinating description of the city and society of Hangzhou, which "apart from its convenient distance from the areas threatened by invasion, had only one trump card: the charm and attractiveness of its scenery. The lake which lies to the west of it and the graceful curves of the hills which surround it still make it today one of the most breathtaking of China's beauty spots" (page 23).

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of the station between Western Lake and the coast is an invitation to compare the site of Hangzhou to China's frontier outpost in Antarctica.

The borrowing of place names, landscape metaphors and vistas has many precedents in the Chinese tradition and would not seem displaced in the Great Wall station of Chinese Antarctica. Sinologists used to believe that Chinese held tenaciously to all the traditions of their culture, including their architectural practices. In 1103, the Song government printed *Yingzao fashi*, a treatise by Li Jie on architectural methods that the emperor had commanded. It would have been nice to find in King George Island influences of Li Jie's principles, but this is not the case. The comparison of the imperial capitals of Hangzhou and Beijing with the Great Wall station cannot be extended further because more examples of place names are lacking to support the identification suggested here. The attachment of toponyms to specific landforms indicate without ambiguity references to three landscape readings, one to the Great Wall section that historically protected Beijing, one to a geomantic archetype, one to the site of fabulous Hangzhou. The physical features of the site selected by the Chinese expedition and the toponyms present in the *Zhongguo Nanji Changcheng zhan ditu* map strongly suggest that the cartographers of Great Wall Station have sought to create a spiritual relationship between the center of China's ancient culture and the wilderness of a small island off the Antarctic coast. Topography, orientation, map and nomenclature all indicate a desire for affiliating Antarctica with China. We should nevertheless remain aware that the evocative function of these Chinese names in Antarctica would lose some of its power, if taken literally.

8. Conclusion

It would be wrong to assume that Antarctica has no ancient cultural landscape, even if the values shared by the scientific community appear to be based on universal beliefs in progress, on modernity, positivism and "national greed," and on the celebration of heroic deeds and occasional martyrdom, and not on a geographical tradition specific to an ethnic group. The landscape of Antarctica has in fact as many identities as states that operate scientific stations. Beyond all scientific rationalizations and political discourses, the construction of the Great Wall station and its subsequent mapping by Chinese and Chilean cartographers illustrate a general principle of cultural identification to a locale. Fildes Peninsula holds at least one spiritual meaning, which is written in the classical language of Chinese landscape perception. As a magic site anchored in imperial China, the Great Wall of King George Island is a jewel in the Antarctic tiara.

Physical locales cannot be transplanted to a different part of the earth but a cultural locale is eminently transportable. Using this principle of identification, China has metaphorically annexed a territory claimed and occupied by Chile, while denying its formal inclusion into the Chinese universe. The Chilean observers who inspected the Great Wall base did not even notice the creation of a tangible Chi-

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nese landscape on Fildes Peninsula.[30] To outsiders the Chinese imprint in Antarctica appears to be negligible, since out of the seventy-three items listed by the British Antarctic Survey as having a historical value, only one is Chinese. It consists of a monolith erected by the First Chinese Antarctic Research Expedition to commemorate the establishment of the Great Wall station. According to the Antarctic Treaty provisions, the "Historic Site and Monument" of the Great Wall station should be protected from damage and appropriately marked with notices in Spanish, French, English and Russian. Incidentally, King George Island has other historic sites: Poland contributed a plaque, grave and cross, to the humanization of Fildes Peninsula, while Germany placed a plaque to commemorate the landing on March 1, 1874, of the scientific expedition aboard the ship Grönland. Ancient China is nevertheless very much present today in the nomenclature of Antarctica. Chinese place names have succeeded in creating a dynamic relationship between topography and community.

After several books staged on Mars, science-fiction writer and National Science Foundation research fellow Kim Stanley Robinson wrote *Antarctica*. This novel related a wilderness adventure expedition and tells us the continent's true story: "caught in the crossfire between oil interests and environmentalists." Interestingly enough, Robinson included in the expedition Master Ta Shu whose name could mean either "destiny" or "the dog days of summer." He was "a Chinese feng shui guru, transmitting his adventures to a Chinese TV audience and therefore telling them all the old tales, in his own way."[31] The geomantic toponyms of the Chinese maps of Antarctica can rehearse old stories as least as well as Master Ta Shu in this American novel since Chinese scientists may have named the unfamiliar landscape of King George Island just to listen to the legends of ancient China.

[30] The leader of the Chilean XIIIth expedition, Patricio Eberhard Burgos, described the Great Wall station on January 31, 1987, two years after its founding: "Descripción: Ubicada en la ribera que va de sur a norte de la bahía que se forma al sur de la península Ardley, en una extension de aproximadamente 300 metros de playa, donde se han instalado las construcciónes de poca consideración y otra area de equipos meteorológicos al aire libre. Circundando toda la base se pueden apreciar 8 antenas de aproximadamente 30m de altura. Al sur de la zona construida se encuentra un espacio usuado para instalar 8 antenas mas pequeñas de color verde y amarillo." Patricio Eberhard Burgos, "Informe del observador de Chile en la Antártica, Periodo 1986–1987, de acuerdo al articulo VII del Tratado Antártico," *Presencia de Chile en la Antártica, XIII Expedicion 1986–87*, Vol. XII, 19–21. Eberhard visited again the Great Wall base in 1989 but the first page of the second report he wrote for *Presencia de Chile en la Antártica* is now missing from the INACh records.

[31] Kim Stanley Robinson, *Antarctica* (New York: Bantam Doubleday Dell Publishing Group, 1998).

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[32] Philippe Forêt. "How the Chinese Discovered the Ice: China's First Expedition to Antarctica, 1984–1985." *Chinese Environmental History Newsletter* 2.2 (1995), 14–15.

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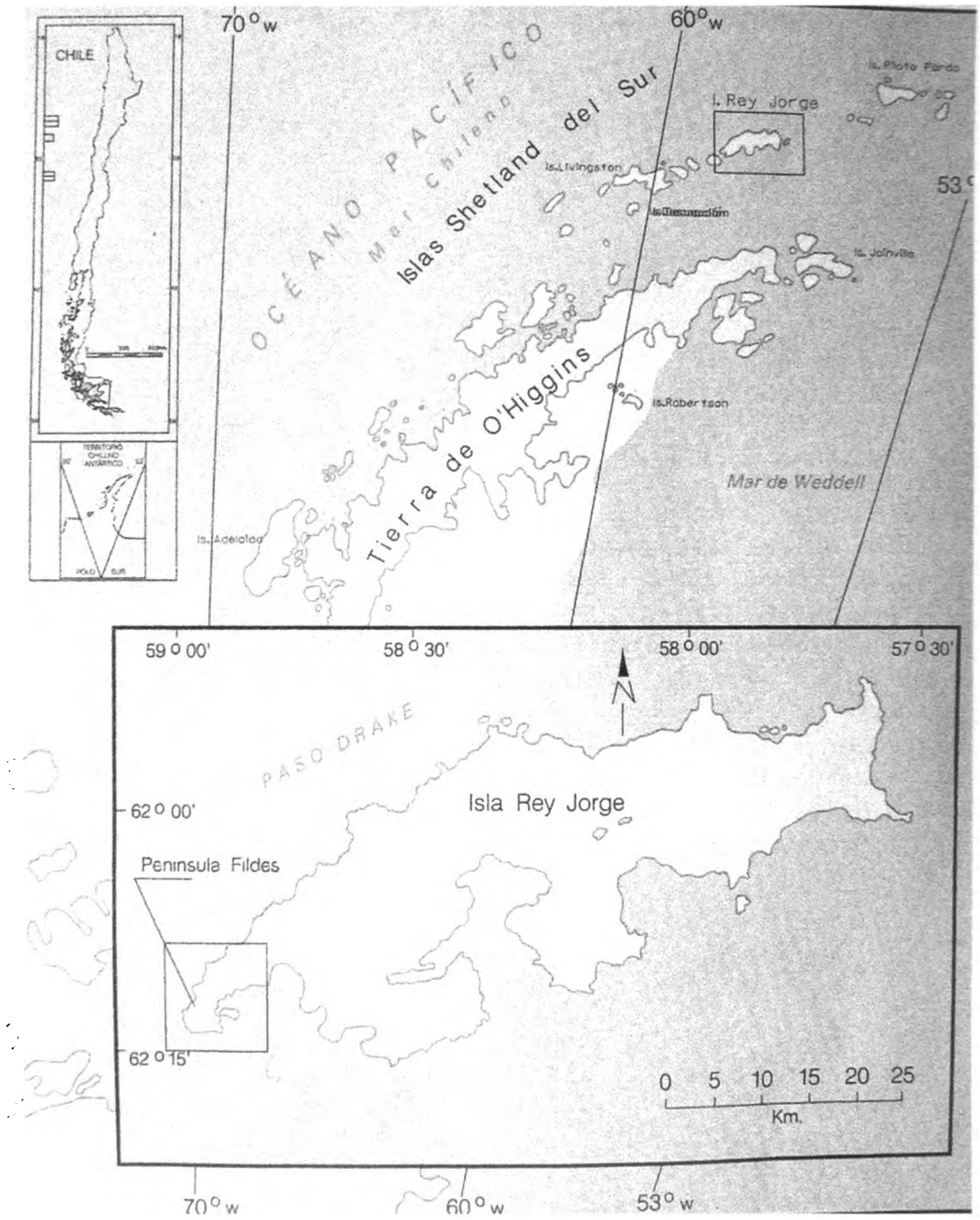

Figure 1: The locations of King George Island and Fildes Peninsula. Source: *Isla Rey Jorge-Peninsula Fildes, Islas Shetland del Sur, XII Region de Magallanes y de la Antártica chilena, Republica de Chile,* Carta topográfica No. 2 Basa Presidente Eduardo Frei Montalva. Instituto Geográfico Militar de Chile, 1996 (detail).

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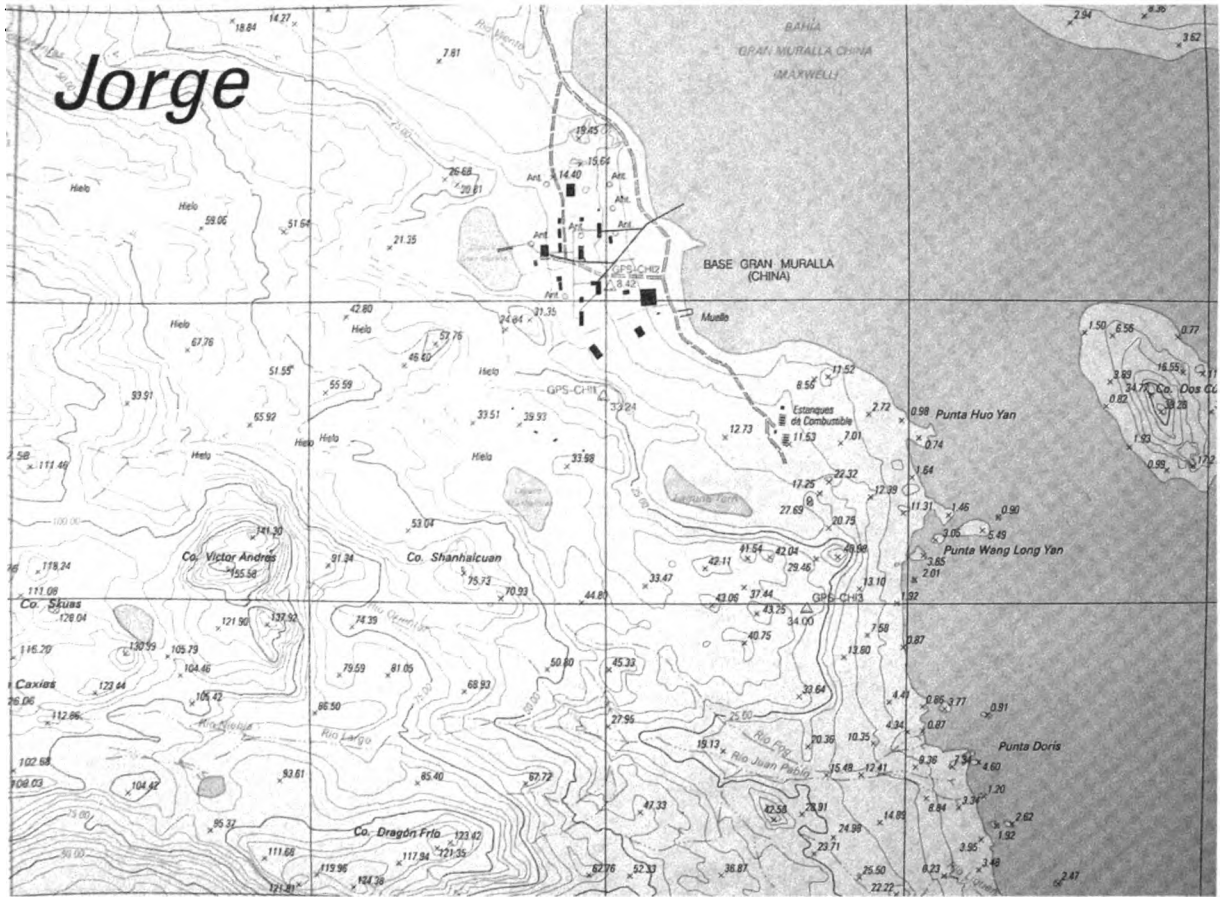

Figure 2: Chilean map of the Great Wall station. Source: *Isla Rey Jorge-Peninsula Fildes, Islas Shetland del Sur, XII Region de Magallanes y de la Antártica chilena, Republica de Chile,* Carta topográfica No. 2 Basa Presidente Eduardo Frei Montalva. Instituto Geográfico Militar de Chile, 1996 (detail).

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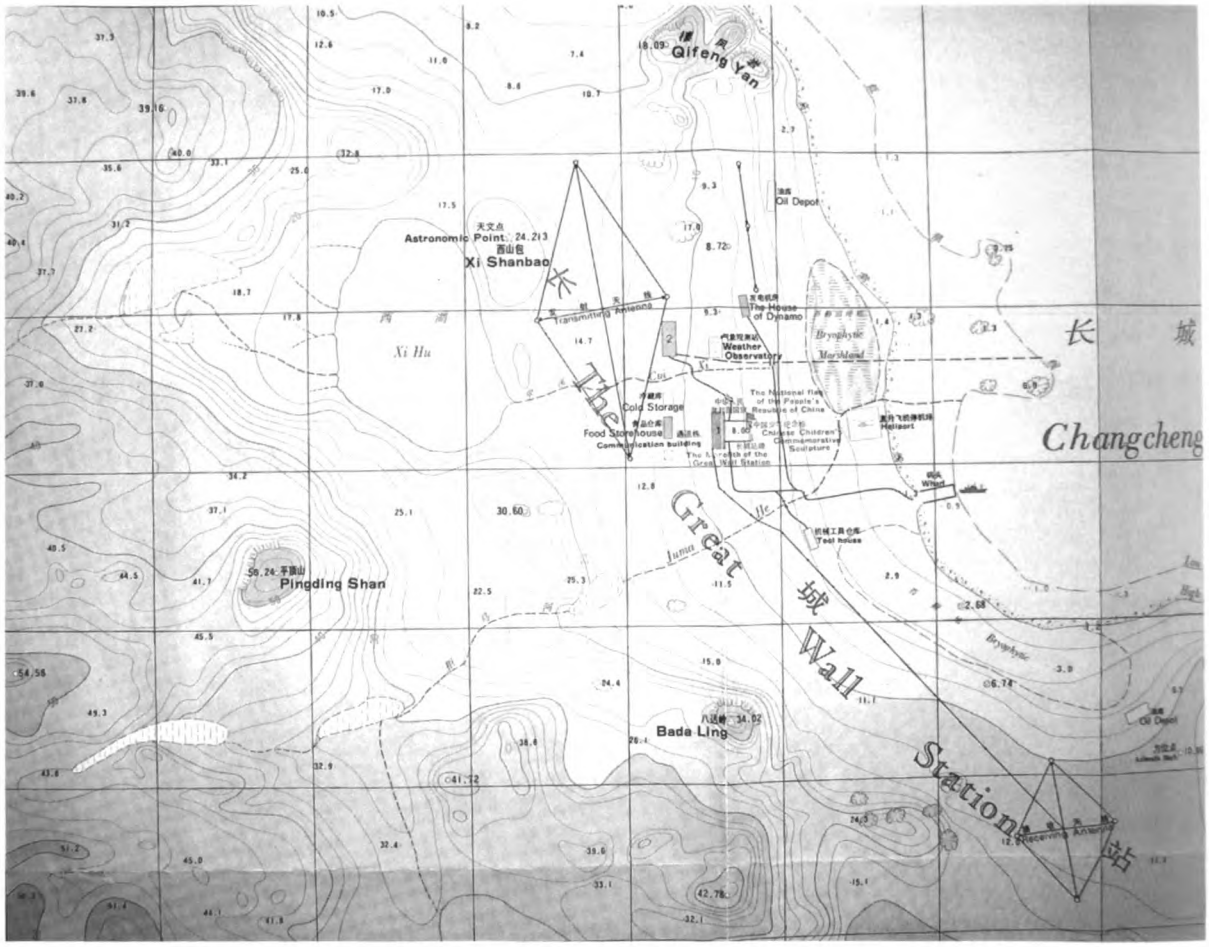

Figure 3: Chinese map of the Great Wall station. Source: *Zhongguo Nanji Changcheng zhan ditu. The Map of the Great Wall Station of China*, Zhonghua Renmin Gongheguo, Guojia Nanji kaocha weiyuanhui, ed., Beijing: Zhongguo ditu chubanshe, 1986 (detail).

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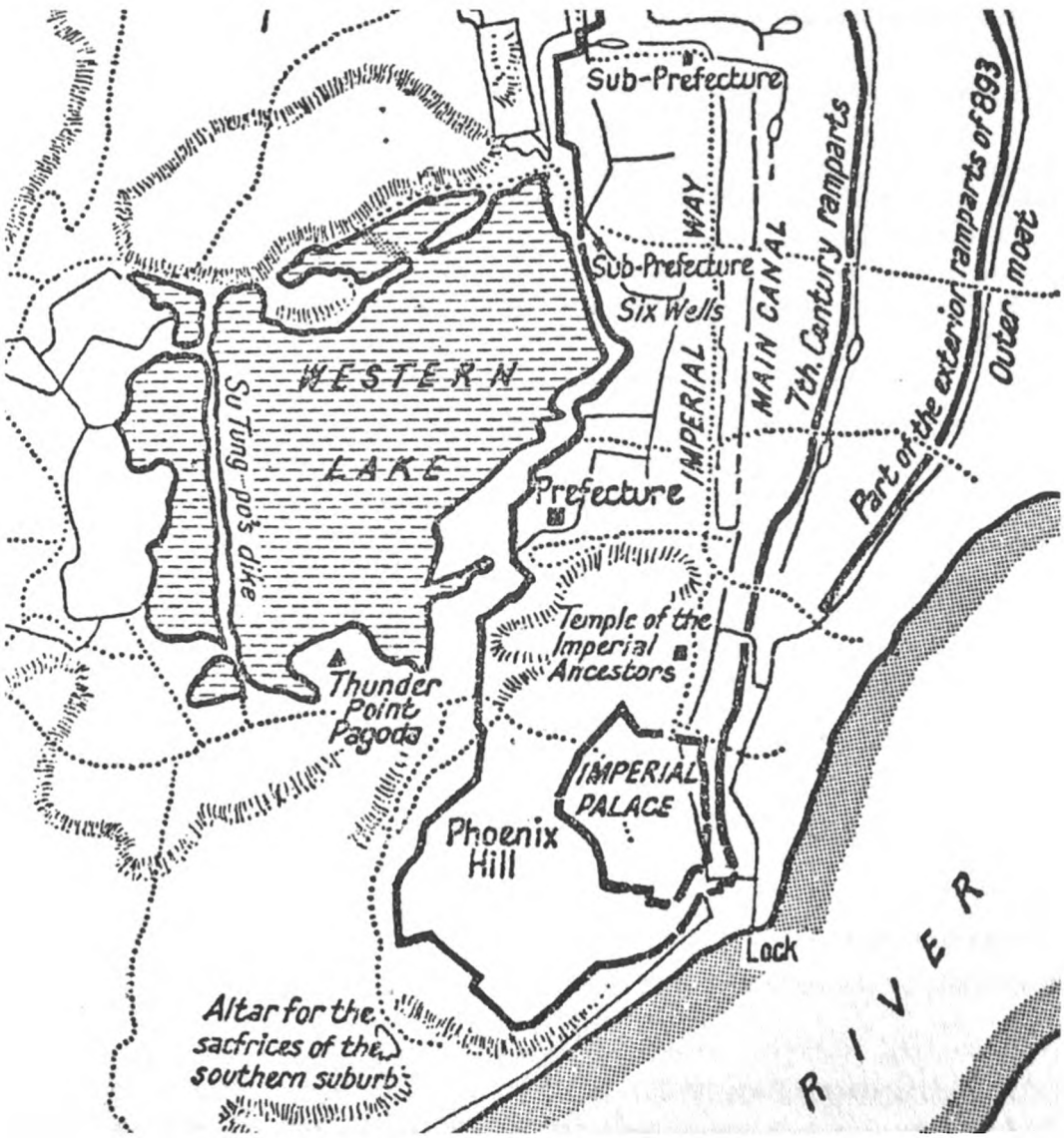

Figure 4: Map of Hangzhou. Source: Jacques Gernet, *Daily Life in China on the Eve of the Mongol Invasion, 1250–1276* (Stanford: Stanford University Press, 1962), page 24.

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Ruling the World With Words: The Idea of *Zhengming* in the *Shizi*

by

Carine Defoort [1]

Ordering the world is not as difficult as it looks. According to the philosopher Shizi 尸子 (circa third century B.C.), "the way of an enlightened king is easy to walk 明王之道易行也" (5:5/10).[2] "The main principle of ordering the world resides in *zhengming* 治天下之要在於正名" (6:7/8–9). The expression *zhengming* is often translated as "rectifying names" or "correct (use of) names."[3] All you have to do—or perhaps rather not do—according to Shizi, is "hold on to the One, remain in quietude, and make names correct themselves and tasks settle themselves. 執一以靜， 令名自正，令事自定" (5:5/5–6). It sounds almost like magic. "*Zhengming* does away with deceit, so that all tasks are fulfilled as in a transformation. 正名去偽，事成若化" (5:5/24; 6:7/9). Not only is it the *sine qua non* of easy and successful government, it also seems to provide the ruler with great power. Shizi even claims that "if one is capable of *zhengming*, heaven's operations will be completed and the earth will be at peace. 苟能正名天成地平" (6:7/9).[4]

[1] This paper, completed in June 2003, began as a talk given in Oxford (May 2002) and in Stockholm (November 2002), where I presented the first fruits of my investigations into the *Shizi*, a text often neglected by classical sinology. While retaining the format of that presentation, I want to open a dialogue about this text and continue the discussion on Chinese philosophy of language. I want to thank Martin Svensson Ekström, Yuri Pines, Michael Nylan, Kai Vogelsang, Nicolas Standaert, Paul Van Els, Wim De Reu and Karen Desmet for their comments. I also thank Christoph Harbsmeier for the *Synonima Serica Comparata* database, Huang Tsu-yü for sending me (through Prof. Göran Malmqvist) his unpublished manuscript on the *Shizi*, and the second year students of the K.U. Leuven who, in 2001–2002, contributed to my early exploration of this text.

[2] Referrences to the *Shizi* are to the ICS Ancient Chinese Texts Concordance Series Philosophical Works No. 39 (Institute of Chinese Studies, Chinese University of Hong Kong). All references to Part I are in the form: chapter: page/line; references to fragments in Part II are to their number in the ICS edition: 14 refers to fragment 14 of Part II.

[3] Aside from the various possible translations of the expression (1) as a "verb-object" construction, *zhengming* might be interpreted as (2) an "adjective-noun" construction: "correct(ed) names" or "correcting names (names that correct reality)," or (3) as an "adverb-verb" construction: "to name correctly."

[4] The expression 天成地平 also occurs in the *Shang shu* "Da Yu mo" (counsils of the great Yu) in a context of political organization and is translated by James Legge, *The Chinese Classics*, III, "The Shoo King" (Taipei: SMC Publishing, 1994); 57 (with his own additions in italics): "The earth is *now* reduced to order, and *the influences of* heaven operate with effect."

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The crucial importance of *zhengming* is made abundantly clear by Shizi. Yet how are we to understand it? How can anybody bring about all these fantastic results merely through a certain manipulation of names or words? In the first part of this paper I will focus on the first thirteen chapters of the *Shizi* which, I argue, could very well date from the third century B.C. The second part focuses on the idea of *zhengming* in chapters 5 and 6. Shizi does not support the interpretation of *zhengming* in terms of the "praise and blame" tradition that attributes to critical scribes the power to judge political events.[5] The responsibility to "correct names" or "name correctly" lies in the hands of the ruler alone and comprises more than just a skillful manipulation of words or terms. The expression refers to a complex political technique for efficiently ruling the state and more specifically, for managing one's ministers.

1. The *Shizi*

Since the Han dynasty, the *Shizi* has been attributed to Shi Jiao 尸佼[6] (ca. 390–330 B.C.),[7] a well-respected adviser to Lord Shang. The latter, according to Liu Xiang, "would never plan anything, set up laws or regulate the people without consulting Shi Jiao. When Lord Shang was executed, Jiao feared to be implicated and fled to Shu," where he was allegedly buried after writing a book. (衛鞅商君謀事畫計，立法理民，未嘗不與佼規之也。商君被刑，佼恐并誅，乃亡逃入蜀。自為造此二十篇書，凡六萬餘言.卒因葬蜀。).[8] Some contemporary scholars, taking the ancient sources at their word, do indeed attribute the book to the period right after Lord Shang's execution (in 338 B.C.),[9] while others consider it a syncretic text of the late third century B.C.[10] But most contemporary research on early Chinese thought does not mention the *Shizi* at all, because of its questionable authenticity.[11]

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[5] For this dominant interpretation see e.g. Robert Gassmann, *Cheng Ming: Richtigstellung der Beziechnungen* (Bern/New York: Peter Lang, 1988). For a concise presentation of this "praise and blame" (*baobian* 褒貶) tradition in relation to *zhengming*, see Michael Nylan, *The Five Confucian Classics* (New Haven and London: Yale University Press, 2001), 268–75.

[6] According to different sources, Shi Jiao was from Chu (see Liu Xiang below), from Lu (see *Hanshu*, 30 "Yiwen zhi" 1741), or from Shu (Liu Xiang) or perhaps, judging from the content of the book, from Jin (Liu Xiang). The *Tong zhi*, 27 quotes the *Hanshu* (while locating him in Jin) and says that his family name, Shi, refers to a region in Henan (to the West of Yanshi district) where he had a fief, as mentioned in the *Fengsu tongyi*, 11.5. See also Wei Qipeng, "*Shizi* yu Zisi zhi xue 尸子與子思之學" (The *Shizi* and the Teachings of Zisi), in "Guodian Chujian guoji xueshu yanjiuhui" (Wuhan: Hubei Renmin, 2000), 637.

[7] Most secondary sources date the author in the fourth century B.C., in the Warring States period, more particularly ca. 390–330 B.C. The *Grand dictionnaire Ricci de la langue chinoise*, V, 320, associates him with the Spring and Autumn period.

[8] See Liu Xiang, *Bielu*, quoted in the *Shiji jijie* commentary on the *Shiji*, 74, 2349. The story of this eventful career might be inspired by the variation of philosophical strands in his book. A similar argument could made with regard to the *Heguanzi*. See Carine Defoort, *The Pheasant Cap Master (He guan zi): A Rhetorical Reading* (New York: State University of New York Press, 1997), 13–17.

[9] E.g. Shui Weisong, *Shizi duben* 尸子讀本 (Taibei: Sanmin shuju, 1997), 1–2; and Wei Qipeng, "*Shizi* yu Zisi zhi xue," 642.

[10] E.g. Sun Xingyan, ed., *Shizi*, in *Congshu jicheng chubian* 叢書集成初編 (Beijing: Zhongjua shuju, 1991), 1; and Graham, "A Neglected Pre-Han Philosophical Text: *Ho-kuan-tzu*," in *Bulletin of the School of Oriental and African Studies* 52.3 (1989): 510.

[11] E.g. Michael Loewe, ed., *Early Chinese Texts: A Bibliographical Guide* (*Early China Special Monograph series*, 2, Berkeley: University of California, 1994). Many scholars have expressed doubts about the authenticity of the text. See Zhang Xincheng, *Weishu tongkao* 偽書通考 (General examination of forgeries) (Shanghai: Shangwu, 1954), 833–34.

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1.1. Doubts about the *Shizi*

There are many good reasons for doubting the traditional fourth century B.C. date of the current text, and perhaps even its late third century B.C. date. For one, the book was never mentioned in any pre-Han sources. Imperial library catalogues indicate that the original *Shizi* disappeared between the Eastern Han and the Yuan dynasties.[12] The current *Shizi* is based on reconstructions by Qing scholars, made on the basis of quotes in other books. The editions of Sun Xingyan (1753–1818, preface 1799) and Wang Jipei (fl. ca. 1800, preface 1811) are most complete as they incorporate and evaluate earlier reconstructions. These are the ones currently in use.[13]

Wang Jipei's reconstruction of the *Shizi* consists of two major parts. He reserves Part I (*shang*) almost exclusively for the 13 chapters attributed to Shizi in chapter 36 of the *Qunshu zhiyao* (The essentials of government extracted from documents, of A.D. 631). Occasionally, and on the basis of similarity in content, he adds fragments attributed to Shizi in another sources.[14] In Part II (*xia*), Wang assembles all the passages attributed to Shizi in other sources, among which the *Erya* (begun in the third century B.C.), *Beitang shuchao* (before A.D. 618), *Yiwen leiju* (A.D. 624), *Chuxue ji* (A.D. 725), *Wenxuan zhu* (A.D. eight century), *Changduan jing* (A.D. ninth century), Yang Liang's commentary to the *Xunzi* (A.D. 819), *Taiping yulan* (A.D. 983) and *Kunxue jiwen* (A.D. thirteenth century). Wang Jipei's reconstruction, finally, also contains a short collection of what he considers doubtful attributions to the *Shizi*.[15]

In the 1920s, the Chinese scholars Zhang Xitang, Sun Cizhou and Jin Dejian laid the basis for a critical evaluation of the *Shizi* and published their views in the *Gushibian* (Discussions of ancient history). The critical verdict was that the current *Shizi* is a collection of textual fragments from at least three different (groups of) authors: They attribute the first layer to a legalist adviser of the fourth century B.C; a second layer, they believe, was written in the Eastern Han by a Confucian *Guliang zhuan* scholar; and the last layer was rewritten during the Wei dynasty between 220 and 226 A.D., when 9 chapters had already been lost. This evaluation of the *Shizi* as a whole is based on fragments from Part I as well as Part II of the current *Shizi*.[16]

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[12] Liu Xiang notes that Shi Jiao wrote a book of 20 *pian* 篇 and more than 60.000 characters (see also *Hanshu*, 30, 1741). The *Suishu*, "Jingjizhi," 1006 includes a *Shizi* in 20 *juan* 卷 and says that nine *pian* were lost. The book was still recorded in the *Songshi*, "Yiwen zhi," 5172, as one *juan*, but by the Yuan dynasty it was totally lost.

[13] Earlier reconstructions, made by Hui Dong (1697–1758), Ren Zhaolin († after 1738) and Zhang Zongyuan (fl. ca. 1765), together with Sun Xingyan's, form the basis of Wang Jipei's edition. Sun's reconstruction is the basis of the ICS and Shui Weisong editions. Wang Jipei's reconstruction is often considered the best. See e.g. Zhang Xitang, "*Shizi* kaozheng 尸子考證" (Textual examination of the *Shizi*), *Gushibian* 古史辨 Vol. 4, 647.

[14] Part I in Wang's and Sun's editions are almost identical except for the different fragments that they add from other sources. Most importantly, Wang does not follow Sun Xingyan in adding two chapters (14 and 15), preserved in the *Zhuzi huihan* 諸子彙函, a collection of excerpts of 1625.

[15] These rejected passages form Part III in the ICS edition, 29–31.

[16] These three layers do not coincide with the threefold reconstruction of Wang Jipei. Neither Zhang Xitang, nor Jin Dejian, nor Sun Cihou criticise any Qing reconstruction. Their criticism is of the *Shizi* as an authentic text.

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1.2. Response to criticism of the *Shizi's* authenticity

My refutation of the *Gushibian* criticism is, for the time being, restricted to what is by far the largest piece of indirect evidence of the *Shizi*, namely the 13 chapters that have been preserved (with title) in chapter 36 of the *Qunshu zhiyao*. I will, for the sake of convenience, call this part the "core," by which I mean the most coherent and, in all likelihood, the earliest portion of the current edition, which can be attributed to one author or group of authors from around the third century B.C.

A first and general reason to begin with this medieval source is its reliability, attested to by previous research.[17] The *Qunshu zhiyao* was presented to the court by Wei Zheng (580–643) in A.D. 631, was lost after the Tang, but was preserved in Japan and returned during the reign of Qianlong. In the *Suishu*, "Jingji zhi" (compiled between A.D. 629 and 639), the same Wei Zheng and his colleagues remark that nine *pian* of the *Shizi* were lost and completed again under Huangchu of Wei (其九篇亡，魏黃初中續),[18] who reigned between A.D. 220 and 226. However, much remains unclear: it is uncertain whether or not Wei Zheng thought the same when he compiled the *Qunshu zhiyao*. Would he have incorporated material that he considered of a later date? Or did he consciously exclude such elements? In his preface, Wei Zheng says: "We have established completely new categories, and in each case completely reproduced the original form 總立新名，各全舊體."[19] Only some decades after the completion of the *Suishu*, Li Xiang (or Prince Zhanghuai, 657–684) wrote about the *Shizi* that "it contains one *pian* dealing with dangerous passes and the sources of rivers and springs in the nine *zhou* 一篇言九州險阻，水泉所起也."[20] Since none of this occurs in the *Qunshu zhiyao*, Jin Dejian suspects that this section on geography found its way into the *Shizi* after the completion of the *Suishu* but before Li Xian's commentary on the *Hou Hanshu*.[21] An alternative explanation is that these later fragments already belonged to the *Shizi* in the third century A.D., but that Wei Zheng did not include them in his anthology since he did not recognize them as belonging to what he calls "the original form."

The second and more specific reason to restrict the refutation to this "core" is that the dating of Part II is more complex since many more sources are involved. The *Gushibian* authors' criticism is mainly based on fragments from Part II, although their evaluation includes the whole text. For example, sections 183 and 184 of Part II comment on the *Guliang zhuan*, which postdates the *Gongyang zhuan*. The latter

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[17] Paul Thompson, *The Shen Tzu Fragments* (Oxford: Oxford University Press, 1979), 63–69 and Herrlee Creel, *Shen Pu-hai: A Chinese Polititical Philosopher of the Fourth Century B.C.* (Chicago: University of Chicago Press, 1974), 303–11 both attest to the reliability of the *Qunshu zhiyao* on the basis of their research of the *Shenzi* 愼子 and Shen Buhai 申不害 fragments respectively. The book was lost in China during the twelfth century but was preserved in Japan from the ninth century. It again became known in China in the late eighteenth century.

[18] *Suishu*, "Jingji zhi," 1006.

[19] *Qunshu zhiyao*, preface, 3a; see Herrlee Creel, *Shen Pu-hai*, 306.

[20] See his commentary on *Hou Hanshu*, 78, 2530. Li Xian adds this description of the content of the book to the standard description by Liu Xiang quoted above. Jin Dejian, "*Shizi* zuozhe yu *Erya* 尸子作者與爾雅" (The author of the *Shizi* and *Erya*), *Gushibian* 古史辨 vol. 6, 307–308 believes that this geographical categorization refers to passages such as 14 and 19 of Part II.

[21] Ibid.

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was probably[22] written during the reign of Jing Di (157–141 B.C.) and both were offcially recognized during the reign of Xuan Di (73–49 B.C.).[23] These *Shizi* fragments must therefore date from the latter part of the second century B.C. at the earliest. Another possible indication of a relatively late date are fragments 7, 8, 9, 10, 176, 178, 179 and 181 of Part II, which remind one of *xungu* 訓詁 commentaries in the style of the *Erya*. While the first three chapters of this compendium may date from the third century B.C., the dates of later parts have not been established. Jin Dejian believes that this style of commentary is typical of the Shu area in the Western Han during the time of Yang Xiong (53 B.C. – A.D. 18).[24]

It is worth noting that even when the *Gushibian* criticism concerns fragments in Part I, several of these fragments simply *do not occur* in the *Qunshu zhiyao*, and hence do not belong to what I have termed the "core." They were inserted into Part I on the basis of other, perhaps less reliable, sources (e.g. in ch. 9 and ch. 10) by Wang Jipei or Sun Xingyan. For example, a recurrent criticism in the *Gushibian* is made on the basis of passage 10:10/4–7 in which Confucius is set on a par with other masters and criticized for favoring *gong* 公 ("impartiality"? "dukes"?), in which Tianzi (presumably Tian Pian) is mentioned as an advocate of *bieyou* 別囿 (ridding oneself of narrow-mindedness), and in which it is said that "their tenets have simply been mutually exclusive for several centuries 其學之相非也 數世矣而已." In the same passage, two sets of synonyms are given, one for the concept of "greatness" and one for "impartiality," in the style of *xungu* commentaries. The whole passage is added to Part I from the "Shigu" chapter of the *Erya*.[25] Two other criticized passages mention the "jade torch," the "sweet fountain," and the "eternal wind," while correlating them with the four seasons and their characteristics (9:9/8–12 and 9:9/14–15). Neither passage occurs in the *Qunshu zhiyao*, but both were added to Part I on the basis of quotes attributed to Shizi in, respectively, the "Shi tian" chapter of the *Erya* and *Taiping yulan*. Since the "Shi tian" is considered a later chapter of the *Erya*, these passages are suspected of dating from, at the earliest, the end of the Western Han.[26] My reason for mentioning these often criticized passages is not to accept or refute them, but only to show that the criticized sections of the *Shizi* do not belong to the "core," i.e. the long quote preserved in the *Qunshu zhiyao*.

There are only two remaining arguments against a third century B.C. date of the *Shizi* core. The first is that 1:1/14–15 and 6:6/9 quote Zengzi (the latter attributing the saying to Confucius). Sun Cizhou believes that Shizi quotes from the *Da Dai*

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[22] The question of dating these texts is much more complicated. See Joachim Gentz, *Das Gongyang zhuan: Auslegung und Kanoniesierung der Frühlings und Herbstannalen (Chunqiu)* (Wiesbaden: Harrasowitz Verlag, 2001), 345–403.

[23] Zhang Xitang, "*Shizi* kaozheng," *Gushibian* 652. For these dates, see Anne Cheng in Michael Loewe, ed., *Early Chinese Texts*, 68, and the *Hanshu*, 88.3621.

[24] Jin Dejian, "*Shizi* zuozhe yu *Erya*," *Gushibian* 6.309–11. For dating the *Erya*, see South Coblin in Michael Loewe, ed., *Early Chinese Texts*, 96.

[25] See Zhang Xitang, "*Shizi* kaozheng," *Gushibian* 4.651, Jin Dejian, "*Shizi* zuozhe yu *Erya*," *Gushibian* 6.309, and Sun Cizhou, "Zai ping *Gushibian* di si ce 再評古史辨第四冊" (A reevaluation of the fourth volume of the 'Discussion of ancient history'), I: "Lun *Shizi* de zhengwei 論尸子的正偽" (About the authenticity of the *Shizi*), *Gushibian* 古史辨 vol. 6, 109. According to South Coblin in Michael Loewe, ed., *Early Chinese Texts*, 96, the "Shi gu 釋詁" chapter belongs to the oldest part of the *Erya*, dating to the third century B.C.

[26] Jin Dejian, "*Shizi* zuozhe yu *Erya*," *Gushibian* 6.309 refers to the link with *Erya*, "Shi tian."

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liji, a book originating from about the second century A.D.[27] But what is the direction of the indirect citation? Who is quoting whom? Or might they both be quoting a third, hitherto unknown text? The second argument is that 11:10/14–15 quotes the content of a poem, "Nan feng ge 南風歌" that was perhaps not yet known in the Han. Jin Dejian remarks that Zheng Xuan (A.D. 127–200) says in his commentary to the "Yueji" about this Ode that "its lines are not yet (or 'not quite'?) heard of. 其辭未聞."[28] Since Shizi quotes the lines while many (other?) Han sources do not, Jin believes that it must postdate the Eastern Han dynasty.[29] This point is also tentative at best.

A third and final defence of the *Shizi* does not focus on the text but on the *Gushibian* scholars' uncritical reliance on traditional bibliographical notices. Their distinction between the two first layers is based on their attribution of the original text (the first layer) to a legalist adviser of the fourth century B.C. The presence of concepts that are in their eyes anachronistic, such as the combination of *ren* (humanity) and *yi* (rightness),[30] speculations on *xin* (heart/mind),[31] and the combination of various strands of thought (e.g. *fa* and *ru*) make the *Shizi* dubious. As will be argued below, however, these concepts simply indicate that the *Shizi* is, at the earliest, from the third century B.C. In the face of these characteristics, there is no compelling reason to attribute the original text to a fourth century B.C. author or to accept the hypothesis of the two first layers.

To conclude, the *Gushibian* postulate of a three-layered *Shizi* is untenable, at least for what I have defined as the "core": the 13 chapters of indirect evidence preserved in the Tang political anthology *Qunshu zhiyao*. Lacking firm evidence for attributing the first layer to the fourth century B.C. and the third layer to the third century A.D., we can tentatively read the core *Shizi* as a circa third century B.C. text. But can we also adduce positive arguments in order to date the text?

1.3. Positive arguments in favor of the *Shizi*

My argumentation in favor of a third century B.C. dating of the core of the *Shizi* is threefold: I focus on grammatical particles, parallels with contemporary texts, and lexical characteristics. Since this type of argumentation is tentative (dependent on academic research in this field), circular (dependent on our knowledge of surroun-

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[27] Sun Cizhou, "Zai ping *Gushibian* di si ce," *Gushibian* 6.108. According to Jeffrey Riegel (in Michael Loewe, ed., *Early Chinese Texts*, 456) "it is doubtful whether it existed as an independent collection much before the beginning of the second century A.D."

[28] *Shiji*, 24.1197.

[29] Jin Dejian, "*Shizi* zuozhe yu *Erya*," *Gushibian* 6.312-13. He lists several pre-Han and Han books that refer to the ode without quoting its content, and believes that this passage was added in the Wei (between 220 and 226). The poem also occurs in the *Kongzi jiayu*, a book that consists of pre-Han passages interspersed with passages by Wang Su (195-256). See R.P. Kramers in Michael Loewe, ed., *Early Chinese Texts*, 258–60. David Schaberg, "Song and the Historical Imagination in Early China," *Harvard Journal of Asiatic Studies* 59.2 (1999), 327, mentions this poem as an example of songs that are first referred to in a story and acquire text afterwards.

[30] According to Sun Cizhou, "Zai ping *Gushibian* di si ce," *Gushibian* 6.109–110, the binominal expression 仁義 must postdate the *Mencius*. For more lexical arguments, see below.

[31] According to Sun Cizhou, "Zai ping *Gushibian* di si ce," *Gushibian* 6.110–111, reflections in chapter 2 on the heart as ruler of the person must postdate *Xunzi* 18.

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ding texts), and problematic for a reconstructed text as short as the core *Shizi* (about 5000 characters), a test with these criteria cannot provide any final proof for the dates of the *Shizi*. But it shows, at the very least, that there are no counter indications against our proposed date.

Grammatical particles. I have subjected the *Shizi* to the criteria proposed by Angus Graham and Bernhard Karlgren. Although these lists may not be without flaws, and while later editors or forgers may have adapted or forged the particles, their presence in the text confirms the relatively early date of the *Shizi*. Checked against Graham's ten linguistic criteria for determining pre-Han texts, the thirteen *Shizi* chapters preserved in the *Qunshu zhiyao* largely fit the test.[32]

(1) *wu* 吾 never appears as object except when inverted in negative sentences;
(2) *ke* 可 and *zu* 足 are followed by a passive;
(3) *xiang* 相 is reciprocal;
(4) *yan* 焉 is equivalent to *yu zhi* 於 之;
(5) *wang* 亡 does not mean 'have not' and does not take on object;
(6) there is no *du* 都 'completely';
(7) no *qie* 且 as injunctive;
(8) no *zhuo* 着 as verbal suffix;
(9) no inverted pronoun in affirmative sentence;
(10) fu 弗 is objectless (besides occasionally 之). One exception is in 1:1/11, where it has an object other than 之

Karlgren's criteria, however, are more complex and are more widely criticized.[33] His initial aim was to consider the authenticity of the *Zuozhuan* by distinguishing between dialects and periods of texts. His criteria for distinguishing third century B.C. texts, offered only as secondary evidence (in order to "push the investigation one step further"), do not provide any counter indication to a third century B.C. date either.[34]

(1) *ru* 如 and *ruo* 若 are frequently used as 'like' or 'as' (*ru* is only used in ch. 8);
(2) no *si* 斯 in the sense of *ze* 則;
(3) no *si* 斯 in the sense of *ci* 此;
(4) no *ji* 及 in the sense of "and, together with";
(5) *hu* 乎 as preposition (does not occur in the *Shizi*);
(6) final *yu* 與 is rare (does not occur in the *Shizi*);
(7) the predominance of *yu* 於 over *yu* 于 in the same sense (于 never occurs in the *Shizi*);
(8) *wu* 吾 (nominative and genitive) use with *yu* 予 and *wo* 我;
(9) final *ye* 邪 occurs (once, in 4:4/6)

[32] See A.C. Graham, *Studies in Chinese Philosophy and Philosophical Literature* (Singapore: Institute of East Asian Philosophies, 1986), 249–64, repeated in Graham, "A Neglected Pre-Han Philosophical Text: *Ho-kuan-tzu*," in *Bulletin of the School of Oriental and African Studies* 52.3 (1989): 504–05.

[33] For a criticism of the use of grammatical criteria for dating texts, and more particularly of Karlgren's list, see Yuri Pines, "Lexical changes in Zhanguo texts," *Journal of the American Oriental Society* 122.4 (2002): 3 and note 1.

[34] See Bernhard Karlgren, "On the Authenticity and Nature of the Tso Chuan," *Göteborgs Högskolas Årsskrift* 32 (1926): 61–65.

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On the basis of these grammatical criteria, the core of the *Shizi could be* a pre-Han or a third century B.C. text, respectively.

Parallel passages. In order to reconstruct the philosophical context of the *Shizi*, I have traced parallel passages in other texts. My findings are largely based on Wang Jipei's commentary, which refers to other passages on the basis of very similar content, or (almost) identical wording of long and short passages. The table below very roughly orders the parallel texts according to their dating as suggested in Michael Loewe's *Early Chinese Texts*, going from late to early texts. Most parallels, broadly conceived, are with books that are generally considered to date from the Former Han, Qin or late Zhou dynasties. The table indicates the number of parallel passages of the *Shizi* (horizontally per chapter) with other texts (vertically) that share at least five parallel passages: the *Shuoyuan* (SY, ca. 17 B.C.) has 7 parallels, the *Huainanzi* (HNZ, 139 B.C.) has 15 parallels, the *Hanshi waizhuan* (HSWZ, ca. 150 B.C.) has 5 parallels, the *Chunqiu fanlu* (CQFL, second century B.C.?) has 5 parallels, the *Lüshi chunqiu* (LSCQ, ca. 239 B.C.) has 15 parallels, the *Hanfeizi* (HFZ, third century B.C.) has 8 parallels, the *Guanzi* (GZ, from the fifth to the first century B.C.) has 5 parallels, the *Xunzi* (XZ, largely third century B.C.) has 9 parallels, the *Mozi* (MZ, from the late fifth to early fourth century B.C. onward) has 6 parallels and *Lunyu* (LY, from the fifth to the third century B.C.) has 6 parallels. Texts with fewer than five parallels have not been included.

Ch. →	1	2	3	4	5	6	7	8	9	10	11	12	13
Text ↓													
SY:7	3			2							1	1	
HNZ:15	3	3		2	1		1	1	1		2	1	
HSWZ:5	4				1				1	1			
CQFL:5		1				2			1			1	
LSCQ:15	2			2	1	2		1	1	1	3	1	1
HFZ:8					1	1		1	1		1	2	1
GZ:5				1	1	1						2	
XZ:9	3	1			1				2			2	
MoZ[35]:6		2							1	1	1	1	
LY:6	1					1	1				1		2

This table is only vaguely indicative of the *Shizi's* philosophical context, since it does not take into account the length of the parallel passages, their closeness (going from identical wording to close paraphrases), their uniqueness (some are stories shared by many sources), the length of the various chapters (ch. 3 has no parallels but it is very short), the relative length of the other texts, the possible direction of borrowing or common source text, and, most importantly, the dates of the parallel passages in the other texts (e.g. various parallels are with the reputedly late chapter 20 of the *Lunyu*). And finally, this list, largely based on Wang Jipei's commentary, is probably

[35] Chapters 14 and 15, which Sun Xingyan adds to Part I on the basis of indirect evidence in the ***Zhuzi huihan*** 諸子彙函, have a strong Mohist flavor.

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far from exhaustive. Like the attempts to date the text on the basis of grammatical characteristics, the analysis of textual parallels awaits further research.

But what can we tentatively conclude from the parallel passages? First, that the *Shizi* is at home amongst texts presumably dating to the Former Han, especially (but not exclusively) the *Shuoyuan*, *Huainanzi*, *Hanshi waizhuan* and *Chunqiu fanlu*. It also shares many passages with somewhat earlier texts such as the *Lüshi chunqiu*, *Hanfeizi*, *Guanzi*, *Xunzi*, *Mozi* (core chapters, and others) and *Lunyu*. It shares no passages with the *Book of Lord Shang*, which is a remarkable fact, since Shi Jiao is traditionally considered to have been the adviser of Shang Yang. Most parallels are shared with *Huainanzi* and the *Lüshi chunqiu* (15 each). The most striking parallels that I have encountered in my search for *zhengming* passages are between chapter 17.1 "Shen fen" of the *Lüshi chunqiu*[36] and chapters 5 and 6 of the *Shizi*.[37] They both discuss the "investigation of the allotted tasks" (*shenfen* 審分) together with *zhengming*, they compel subjects to do their "utmost" (*jin* 盡) and "exhaust" (*jie* 竭) their capacities or knowledge, and they analyze problems in terms of the relation between "realizations" (*shi* 實), "names" (*ming*) and "allotted tasks" (*fen*), to name only some recurrent themes. Even more impressive are the shared (although not literal) analogies: one between division of labor and land-tilling (*Lüshi chunqiu* 17/1.1 and *Shizi* 6:6/10–11) and one between easy ruling and controlling horses (*Lüshi chunqiu* 17/1.3 and *Shizi*, 5:5/25–26 and 6:6/3–4).

Lexical characteristics. A third type of dating strategy focuses on lexical change. While forgers may have been able to falsify the ancient grammar, according to Yuri Pines, they were much less aware of lexical changes and hence less able to control vocabulary when forging texts. Also, while grammatical changes can be explained stylistically, changes in vocabulary present a demonstrable temporal parameter. Yuri Pines' criteria are listed chronologically, starting from the late fourth century B.C. down to the late third century B.C. The regular occurrence of expressions such as *yingyang* and *buyi*, for example, indicate that a text cannot be earlier than the (late) third century B.C.:[38]

> (1) *nu* 弩 "crossbow" or *shu* 樞 or *ji* 機 "trigger" are used metaphorically from the *Mencius* onward.
> It does not occur in the *Shizi*, except once in an analogy (5:5/22–23) that *does not occur* in the *Qunshu zhiyao*.[39]
>
> (2) *renyi* 仁義 "benevolence and propriety" appears in the *Mozi* and becomes very current from *Mencius* onward.
> As a binominal expression it occurs three times in the *Shizi*, but the two terms separately are sometimes paired in arguments (2:3/15, 12:11/3 and 13:11/17).

[36] Most scholars consider the *Lüshi chunqiu* a pre-Qin work (postface of 239 B.C.). Brooks & Brooks believe that it partly dates from the Qin dynasty: the "Lan" of 220 B.C., and the "Lun" of 208 B.C. See the "Warring States Project," http://www.umass.edu/wsp/

[37] The closest parallels are in the first three passages of 17.1 as numbered by John Knoblock and Jeffrey Riegel, trans., *The Annals of Lü Buwei* (Stanford: Stanford University Press, 2000), 405–407. The most remarkable differences in the later parts of 17.1 are (1) the recurrence of the 'ox' and 'horse' paradigm, which usually occurs in logical discussions and (2) the mystical description of the central person's position and attitude. Both are absent from the *Shizi*.

[38] See Yuri Pines, "Lexical changes in Zhanguo texts."

[39] The line occurs in the *Lüshi chunqiu*, 16.6.4. See Knoblock and Riegel, trans., *The Annals of Lü Buwei*, 396.

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(3) *wanwu* 萬物 "ten thousand things" in the sense of "all things" appears after the *Mencius* and figures prominently in late Zhan'guo texts.
It occurs twelve times in the *Shizi*.

(4) *wansheng* 萬乘 "ten thousand chariots" referring to powerful states indicates, according to Pines, a pre-300 B.C. provenance.
It occurs only once in the *Shizi* (6:6/24).

(5) *li* 理 "inner structure, pattern, principle" was introduced in late fourth century discourse but increased dramatically in third century texts.
In the *Shizi* it occurs only three times (3:3/29, 3:4/1; 6:6/17).
(6) *yinyang* 陰陽 in the sense of "cosmic forces or binary opposites" is typical for late Zhan'guo texts.
It does not occur in the *Shizi*.[40]

(7) *buyi* 布衣 "plain clothed" became widespread in the second half of the third century B.C.
It does not occur in the *Shizi*.

On the basis of my own research I would be tempted to add *zhengming* to this list. In most pre-Han texts, including *Lüshi chunqiu* 17.1, this expression mainly occurs in a political context. John Makeham has analyzed the evolution of *zhengming* from the point of view of social roles toward more general reflections on names predominant in later texts.[41] Discussion of *zhengming* in, for example, the *Chunqiu fanlu*[42] and the *Yinwenzi*[43] goes beyond the political realm. As we will see below, the *Shizi*'s interest in the "correct use of terms" is of a political nature.

Pines' lexical criteria could confirm a relatively early date for the core *Shizi* (before 300 or 250 B.C.), were it not for their tentative nature, both in general and, more specifically, for a text as short and questionable as the reconstructed *Shizi*. The absence of a term (*argumentum ex silentio*) cannot firmly sustain a dating argument. Furthermore, there may be other explanations for their absence than the temporal one (viz. region, style, content, etc.), and also for why some terms occur in one source and not in others. And, again, the argument depends largely on the dating of the surrounding texts that support the lexical criteria presented by Yuri Pines.[44]

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[40] In Part II, *yin* occurs once and *yang* seven times in personal names or in a concrete sense. There is no occurrence in Part I of the *Shizi*.

[41] See John Makeham, *Name and Actuality in Early Chinese Thought* (New York: State University of New York, 1994), 39, 43.

[42] *Zhengming* is much discussed in two exegetical chapters of the *Chunqiu fanlu:* 35 "Shencha minghao," and 36 "Shi xing." The former (Su Yu, ed., *Chunqiu fanlu yi zheng*; Beijing: Zhonghua shuju, 1996) (284–310), continued and repeated in the latter (Su Yu, ibid., 310–12), is a long philosophical reflection on topics that do not occur in the *Shizi:* the cosmic origin of names, implications for the discussion about human nature, and the responsibility of the sage or the 'gentleman' of the *Chunqiu* to name correctly. The analogy with the marking-cord (繩) is present in the *Shizi*. All other occurrences of *zhengming* in the *Chunqiu fanlu* are singular and questioned by Su Yu: he suggests to move one occurrence in ch. 4 to ch. 35 (see ibid., 68); one occurrence is moved from ch 67 (ibid., 406) to ch. 65 (ibid., 399) and one from ch. 81 (ibid., 466) to ch. 82 (ibid., 472).

[43] *Zhengming* often occurs in *Yinwenzi*, "Dadao shang" in a general and philosophically sophisticated sense. A.C. Graham, *Disputers of the Tao: Philosophical Argument in Ancient China* (La Salle: Open Court, 1989), 95, dates this text around 200 A.D.

[44] Other terms very tentatively mentioned by Yuri Pines as indicative of a relatively late provenance are *qian* 錢 ("coins"), *baixing* 百姓 and *qianshou* 黔首 in the meaning of "all the people," *chuan* 船("a boat"), or *qi* (騎, "riding a horse"). See Yuri Pines, "Lexical changes in Zhanguo texts," note 20. Of those terms, only *baixing* occurs, in Chapters 2 and 12.

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To conclude, there are reasons for doubting the dates of the current *Shizi*: the text has been reconstructed in the Qing dynasty, is relatively short (ca. 11.000 characters for Parts I and II), and may contain Later Han or post-Han material, especially in Part II and the non-*Qunshu zhiyao* passages in Part I. But there are no firm indications that the "core"—by far the longest piece of indirect evidence, preserved in the *Qunshu zhiyao*—is a particularly late or problematic text. Although grammatical particles, parallel passages and lexical characteristics do not provide any definite evidence for its dating, positively speaking, they situate the intertextual climate of the *Shizi* core in the third century B.C, while negatively speaking, they do not provide any counter indication to that date.

2. How to understand *zhengming* in the *Shizi*?

"Rectification of names" or the "correct use of terms" has often been discussed as a central concern in pre-Han Chinese philosophy. *Ming* 名 in this binominal expression does not refer to proper names nor to a reputation, but, according to Knoblock, to "all words, whatever their kind and however they functioned," but usually focusing, I believe, on the social and political realm.[45] It is less clear what *zheng* 正 ("correct, rectify, upright, straight, direct, exact...") stands for. But the consensus is that it "always implied correspondence with the model or standard indicated in the comparison."[46] What exactly was the standard? In other words: how did one determine which "names" are "correct"? And whence comes the force of correct names? In other words: how can a correct use of names be powerful enough to bring about the desired effects?

This is not the appropriate forum for discussing all the other instances of *zhengming* in pre-Han and early Han texts. But I will briefly present four comments on *zhengming* scholarship in general, in order to bring Shizi's contribution into perspective.[47] I will then turn to the meaning of *zhengming* in the *Shizi*, before suggesting a division of the technique of *zhengming* into five important steps.

2.1. Four comments on *zhengming* research in general as a background to its interpretation in the *Shizi*

My first general comment on *zhengming* research is that strong claims made by sinologists about the meaning of *zhengming* (its importance and content) in ancient

[45] John Knoblock, tr., *Xunzi: A Translation and Study of the Complete Works* (Stanford: Stanford University Press, 1994), vol. 3, 113.

[46] Ibid.

[47] For an elaboration of these comments, see Carine Defoort, "Some Reflections on *Zhengming* Scholarship: The Correct Use of Names," presented at the EACS meeting in Moscow, August 2002.

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Chinese thought[48] are out of proportion in view of the relatively few explicit occurrences of the expression quoted from the texts: *zhengming* is in fact seldom mentioned by the ancient masters, and only a selection of those passages is usually quoted in *zhengming* research.[49]

One text that is largely neglected is the *Shizi*, although its discussion of *zhengming* is among the most elaborate in pre-Han and early Han sources.[50] Since the term *zhengming* only occurs in two consecutive and closely related chapters of the *Shizi*–"Fen" 分 (ch. 5; "Allotting duties") and "Fa meng" 發蒙 (ch. 6; "Dispelling ignorance")—my interpretation will exclusively rely on them.[51]

Second, there is a strong reliance in *zhengming* research on passages that do not at all contain the expression. Of course, the interpretation of *zhengming* is not to be restricted to explicit references to *zhengming* alone, but the reliance on other passages is so dominant that the focus risks being blurred. Robert Gassmann, for example, dedicates a whole monograph to the study of *zhengming* but in fact analyzes only one passage containing the term *zhengming*.[52] And the current interpretation of Confucius' view of *zhengming* is largely founded on loose passages that do not mention the term.[53] As for the *Shizi*, even though not every passage in chapters 5 and 6 mentions the expression explicitly, there is a relative consistency throughout the two chapters. This fact is further supported by a prevailing interest throughout each passage in at least one of the following related topics: *fen* 分 (allotment, task, duty), *zheng* 正 (correctness), *yan* 言 (speech, instructions), *zhengyan* 正言 and, most importantly, *mingfen* 名分 (correspondence of titles with tasks). I therefore consider chapters 5 and 6 to be comparatively relevant to Shizi's ideas on *zhengming*.

A third comment is that the current interpretation of *zhengming* tends to attach a consistent philosophical doctrine to the term. The fact is, however, that *zhengming* covers, as Geoffrey Lloyd put it, "a nexus" of problems or "a nest of interrelated" issues.[54] It is not only sparsely mentioned and poorly illustrated, but also differently and inconsistently so, in the various books and chapters where the term is invoked. Even though chapters 5 and 6 of the *Shizi* are relatively coherent in their interpretation of *zhengming*, the concept nevertheless retains a large measure of vagueness. It

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[48] Robert Gassmann, *Cheng Ming: Richtigstellung der Beziechnungen*, 1, argues that *zhengming* "gehört zu den zentralen Themen in der Geistesgeschichte des alten Chinas." See also Hu Shi, 46. For the importance of *zhengming* for Confucius or Confucianism, see also Fung Yu-lan, *A History of Chinese Philosophy* (Princeton: Princeton University Press, 1937/1973), vol. 1, 59; Makeham, *Name and Actuality in Early Chinese Thought*, xv; Ren Jiyu, *Zhongguo zhexue fazhanshi, xian Qin bufen* 中國哲學發展史・先秦部 (The evolution of Chinese philosophy: Pre-Qin) (Beijing: Renmin, 1983), vol. 1, 68–71.

[49] Often quoted passages are *Analects*, 13.3, *Xunzi* 22 "Zhengming", two sayings attributed to Shen Buhai and one occurrence of *ming zheng* in *Hanfeizi* 7.

[50] Other relatively neglected passages occur in *Guanzi*, 31, 36, 38, 43, 78 and in *Lüshi chunqiu* 16.8 and 17.1, resp. titled "Zhengming" and "Shen fen."

[51] Passages from other core chapters of the *Shizi* will be cited in the notes.

[52] Robert Gassmann, *Cheng Ming: Richtigstellung der Beziechnungen*, 67–156, thoroughly analyzes *Lunyu* 13.3 and then elaborates on the *Chunqiu* as an example of *zhengming* practice in terms of the "praise or blame" tradition, although *zhengming* is never explicitly mentioned there, except once in *Guliang zhuan*, Xigong, 5/19.8.

[53] *Lunyu* 13.3, the only passage containing *zhengming*, is almost always interpreted in terms of a host of other *Lunyu* passages that do not refer to the expression: *Lunyu*, 16.14, 6.24. See e.g. Makeham, 39–43. He also adds *Lunyu* 3.1 and *Lunyu* 3.2.

[54] See Geoffrey Lloyd, "The object of rectification and the Greek points of view," in Karin Chemla & François Martin, eds., "Le Juste Nom," *Extrême-Orient–Extrême-Occident* 15 (1993): 151 and 160.

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seems to function like a slogan, a "magic trick" for rulers, consisting of various parts upon which Shizi does not always bother to elaborate all too clearly. Perhaps he thought some reflections too obvious or generally accepted to be stated explicitly. Or perhaps he did not want to lose his ruler's favor by being over-precise in his advice.

And finally, there is an overemphasis in the literature on finding correspondence in the interpretation of *zheng* and on the search for the norm that makes names "correct."[55] The fact that the Chinese masters themselves did not try to describe this norm unambiguously might indicate a relative lack of interest in the correct relationship between language and something else, e.g. reality, the tradition or the definition of social roles.[56] In the *Shizi*, *zheng* has various meanings: "names" (titles or job descriptions) can be "correct" in the sense that they correspond with something else (e.g. somebody's capacities), or that they are clearly demarcated from something else (e.g. the description of another job), or sometimes that they are consistent among each other (e.g. positive judgments with job descriptions). But, equally important, *zheng* also seems to be related to concepts of centrality, uniqueness and power, to a unique position that is not named and cannot be made to correspond with anything else.

2.2. The meaning of *zhengming* in the *Shizi*: its value and field

Chinese masters who mention *zhengming*, are without exception in praise of it, but Shizi beats them all: his glorification of this ruling technique as a miraculous trick displays a persuasive conviction similar to that which lies behind modern advertisements. We saw, above, that he promotes it as a key to political, social and perhaps even cosmic order (6:7/9).

> An enlightened ruler ordering his people reaches achievements without much work, his state is well governed while he remains relaxed, and his instructions are obeyed while he seldom speaks. That he has many achievements without much work is because he preserves what is crucial. That his state is well governed while he remains relaxed is because he uses persons of worth. And that his instructions are obeyed while he seldom speaks is thanks to *zhengming*.
> 明王之治民也，事少而功立，身逸而國治，言寡而令行. 事少而功多，守要也；身逸而國治，用賢也；言寡而令行，正名也。(5:5/4–5)

In what field can *zhengming* be applied? The *Shizi* locates it in at least three interconnected fields relating to each other like concentric circles. The most general descriptions refer to *zhengming* as a necessary, easy and efficient way of ordering the people and ruling one's state. Since Shizi believes that personnel management is crucial in this respect, he often analyses *zhengming* more specifically as a technique for hand-

[55] See the definition of Knoblock quoted above. The correspondence with reality is sometimes added in the interpretation and translation. Allyn Rickett, *Guanzi: Political, Economic, and Philosophical Essays from Early China* (Princeton: Princeton University Press, 1998), vol. 2, 138, translates *zhengming* as "rectify names *so that they correspond to reality*" (my italics).

[56] Hans-George Moeller, "Chinese Language Philosophy and Correlativism," *Bulletin of the Museum of Far Eastern Antiquities* 72 (2000): 98–103, has questioned the current interpretation of Xunzi's "Zhengming" chapter as being primarily, in Graham's terms (*Disputers*, 261), "on the relation between names and objects." See below.

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ling one's inferiors, especially the ministers. Concrete examples of this technique, finally, mainly refer to what seems to be Shizi's most central concern: to find, attract and use the best candidates for office, the persons of worth (*xian* 賢). This is one major point where Shizi differs from Hanfeizi, who explicitly rejects *xian* as a disturbing factor in the functioning of *zhengming* or *xingming* 形名.[57]

This is the ruler's main task: "The person acting as the ruler considers the use of men of worth as his achievement. 為人君者以用賢為功" (6:7/9–10). Nothing is more important than finding the best person for each task.

> Better than succeeding through careful scrutiny of mundane affairs, is to promote a person of worth. Better than succeeding through the promotion of a person of worth, is to correctly estimate that person. Estimating that person and being able to put him to use, that is perfection!
> 慮事而當不若進賢。進賢而當不若知賢。知賢又能用之，備矣。(6:7/8)

This central responsibility is crucial, since the general success or failure of a state ultimately depends on it:

> The three reasons why a state becomes disordered are: a lack of knowledge concerning the use of people of worth, the inability to attract them even if one knows how to use men of worth, and failure to use them to a full extent once they have been attracted. If with *zhengming* one manages them, then persons as knowledgeable as a Yao or Shun will certainly be made total use of. If with *mingfen* one instructs them, then persons as violent as Jie and Zhou will certainly be effectively stopped. If persons of worth are being totally used and the violent are being stopped, then the way of ordering people cannot become any better.
> 國之所以不治者三：不知用賢，此其一也. 雖知用賢，求不能得，此其二也。雖得賢，不能盡，此其三也。正名以御之，則堯舜之智必盡矣。名分以示之，則桀紂之暴必止矣。賢者盡，暴者止，則治民之道不可以加矣。(6:6/24–26)

We now know that *zhengming* is important for Shizi, and that it mainly functions in the field of personnel management. But how does it work? General statements glorifying *zhengming* are followed by further specifications that allow us to unravel the complexities of the technique in at least five important stages, although the author does not explicitly do so himself. As a general policy, "correct naming" minimally consists of the following steps: (1) appointing titles to the right persons, (2) making clear and distinct titles or job descriptions, (3) judging accordingly, (4) punishing and rewarding consistently, and (5) making decisions from a central position of power. In some passages, the expression is used to describe only one of these aspects.

2.3. *Zhengming*: giving a title to the right person

One aspect of *zhengming* is to give "correct titles" so that the attitude or capacities (the reality) correspond with the demands of a certain job (the name or title standing for certain tasks or duties). But how does the ruler discover the best person for

[57] E.g. in chapter 5 and in chapter 7, where one of the major disasters for a ruler is said to be caused by "putting persons of worth in charge 任賢." See Wang Xianshen, ed., *Hanfeizi jijie* 韓非子集解 (Beijing: Zhonghua shuju, 1998), 27, 41–42.

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each task? Shizi suggests that his ministers' behavior, their strong and weak points, ought to be made known to the ruler on a daily basis, so that he is maximally informed when appointing different people to different positions.

> Since information about the stupidity or intelligence of his ministers is shown to him on a daily basis, he selects the one cleverest in affairs and delegates the planning to him. Since information about those promoted by the ministers is shown to him on a daily basis, he selects the one most knowledgeable about men's qualities and delegates the appointment of personnel to him. Since information about the ability or inability to order is shown to him on a daily basis, he selects the one who is best at the job and delegates the preservation of order to him.
> 群臣之愚智日效於前，擇其知事者而令之謀。群臣之所舉日效於前，擇其知人者而令之舉。群臣之治亂日效於前，擇其勝任者而令之治。

The result is that everybody competes for the ruler's approval:

> Since the behavior of ministers can be examined, when the person selected for his worth is appointed, people will compete in their behavior. Since the one with superior skills is responsible for the order, the hundred offices will not become disordered. Since the one most knowledgeable about men's qualities gets to appoint others, men of worth will not remain unnoticed. Since the cleverest one in affairs takes care of planning, the major undertaking [of ruling the state] will go perfectly well.
> 群臣之行可得而察也，擇其賢者而舉之，則民競於行。勝任者治，則百官不亂。知人者舉，則賢者不隱。知事者謀，則大舉不失。(5:5/19–22)

This procedure of daily evaluation may raise practical questions about, on the one hand, the attraction and selection of talented people far away from the political center and, on the other hand, about the enormous workload for the ruler who daily supervises his ministers at the center of power.

As for men in the periphery, outsiders who have not yet acquired the title of minister, they must be discovered and advanced by those who are working for the ruler: "The person acting as minister considers the advancement of men of worth as his achievement. 為人臣者以進賢為功" (6:7/9). The initial criteria for the promotion of new persons are what others think of them, not just anybody, but "privileged others" such as parents or relatives (親), lords (君) and friends (友). These opinions are, in Shizi's metaphor, the "tallies" on the basis of which a person may be evaluated:

> Well, as tallies are matched, right and wrong become apparent in themselves. Behavior also has tallies: if these three opinions are matched with it, the value of one's behavior becomes apparent of itself. This is the method to observe a person's behavior.
> 夫符節，合之則是非自見。行亦有符：三者合則行自見矣。此所以觀行也。(5:5/17–18)

Once good candidates are advanced, they will be appointed by the minister in charge of personnel matters. From that moment on they are to be supervised daily by the ruler as described in the passage above.

But how about the actual workload of such supervision, repeatedly described as being easy and relaxed? It is not clear how the information about the ministers

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would be "made clear" or "shown in front of him" (效於前) on a daily basis. Checking regular reports to the throne, in oral or written form, is hard work. What Shizi has in mind—perhaps aside from more regular reports—is a relatively informal setting, where the ruler picks up his crucial information.

> When the Duke of Zhou ordered the empire, alcohol and meat were not removed from his table; bells and drums were not taken down from their stands. Since the state was ordered while he listened to music, he did not put any physical exertion into it. Since persons of worth were selected while he was drinking alcohol, he did not put any mental exertion into it. Since people became wealthy while he took care of himself,[58] he did not put any moral exertion into it. For one who knows to proceed in this Way, many persons of worth will serve; the simple as well as the clever ones will do their utmost best.
> 周公之治天下也，酒肉不徹於前，鐘鼓不解於懸。聽樂而國治：勞無事焉。飲酒而賢舉：智無事焉。自為而民富：仁無事焉。知此道者也，眾賢為役，愚智盡情。(5:5/6–8)

The most natural and effective way, it would seem, of gaining information for the ruler is to be friendly but alert at court rituals and banquets, perhaps even loosening the ministers' tongues by serving them alcohol.

2.4. To make clear and distinct titles or job descriptions

One meaning of *zhengming* is thus to "award titles correctly (i.e. to the correct person)." This task is made feasible not only through daily supervision and the ritual atmosphere at banquets, but, more importantly, through the use of *mingfen*: the correspondence of *ming* (names) with *fen* (duties, tasks). *Zhengming* and *mingfen* are closely related in the *Shizi* (see 6:6/24–26 above). Control over the correspondence of "names" with "task" in the hands of an enlightened ruler is compared to the reins of a team of horses in the hands of a skillful charioteer.

> The correspondence between names and tasks is something the sage examines closely. Zaofu's way of interacting with horses was by a subtle manipulation of the reins. The enlightened king's interaction with his ministers is by a subtle examination of the correspondence between names and tasks, so that none of the ministers dare not to exhaust fully his strength and intelligence. Whether the empire can be ordered, depends on the completion of the division of tasks.
> 若夫名分，　聖人之所審也。造父之所與(馬)[59]　交者少操轡，馬之百節皆興。[60]
> 明王之所以與臣下交者，少審名分，群臣莫敢不盡力竭智也。天下之可治，分成也。(6:6/3–4)

[58] The expression (*zi wei*) occurs in a similar passage in the *Zhuangzi*, "Tiandi" (32/12/73), where sagely government is described by Zhun Mang: "Assign offices so that no abilities are overloocked, promote men so that no talents are neglected. Always know the true facts and let men do what they are best at. When actions and words proceed properly (*zi wei*) and the world is transformed (*hua*), then as a wave of the hand and a tilt of the chin all the people of the four directions will come flocking to you." See Burton Watson, *The Complete Works of Chuang Tzu* (New York: Columbia University Press, 1968), 137. I have translated the expression differently in order to preserve the contrast in the three parallel lines.

[59] Following Wang Jipei, who adds this character.

[60] Following Sun Xinyang, who corrects 與.

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The examination of *mingfen* is slight or subtle (少) in the sense that it does not demand much labor, but it does deserve the ruler's full attention. Shizi never explicitly says whether *ming* refers to the title of a specific job, to the official description attached to it, to the promises made by a minister and recorded at court when he gets the responsibility for a certain task, or to all of this. But it must correspond well with the task, so that everyone concerned knows perfectly what service is expected, and perhaps also, which response will follow the accomplishment of the task. The advantage of relying on this correspondence is that the ruler cannot be blinded or misguided by flattery, excuses, pretense, bluff or any other type of deceit (偽) executed by his ministers. "With clear allotments, he will not be blinded. 明分則不蔽" (6:7/4).[61] The only thing that counts is the correspondence between the job and its description. Looking at the ministers' performances through the spectrum of specific tasks and clearly stipulated jobs helps the ruler to see clearly.

And *zhengming* has a role to play in this respect: by making the "names" clear and unambiguous, the respective tasks corresponding to them also become transparent. It provides the ruler with a fixed standard, just as the "marking-cord" helps the craftsman correctly estimate his material. "For the survey of one's ministers, there is a marking-cord too: by using names, one attracts[62] them. 夫觀群臣亦有繩，以名引之" (6.5:74; see also 6:6/12, 6:7/7). The advantage of clearly stipulated jobs is that no one can either overstep the limits of his job or avoid his responsibilities (see 6:6/5 below). Shizi seems to focus on the latter: an analogy with land-tilling shows the efficiency of a division of labor.

> If one makes a mass of people work all together, they will be slow. If one divides the plots, they will be quick. Why is that? Because they can nowhere evade their faults. Speech too has its 'plots' that must be divided. If a ruler and minister occupy the same 'plot', the minister gets the opportunity to evade his faults.
> 夫使眾者詔作[63]則遲。分地則速。是何也？無所逃其罪也。言亦有地，不可不分也。君臣同地則臣有所逃其罪矣。(6:6/10–12)[64]

The author is more concerned here with the clear distinction between minister and ruler than between ministers mutually.

2.5. To judge consistently

We saw that the clear stipulation of tasks (*mingfen*) provides security for all parties concerned. At the top, it protects the ruler against flattery or sophistry; and at every echelon of the political hierarchy, it unambiguously provides the ministers or candidates for office with criteria on the basis of which they can compete. But clear job

[61] *Zhengming* is also often promoted as a remedy against deceit (*wei*) and trickery (*qiao*) in *Hanfeizi* 8 (Wang Xianshen, ibid., 45).

[62] One technical sense of 引 is "attraction", but it also occurs together with the marking-cord in the "Zheng ming" chapter of the *Xunzi*. Watson translates: "one stretches a line to distinguish between crooked and straight." See Burton Watson, trans., *Hsün Tzu. Basic Writings* (New York, Columbia University Press, 1963), 148.

[63] Shui Weisong, ed., *Shizi duben*, 66, glosses 詔作 as "collaborate" (合作). The parallel passage in the *Lüshi chunqiu*, 17/1.1, has 公作. See Knoblock and Riegel, 405.

[64] For the use of *zhengming* against evading one's faults, see *Shen Buhai* 1.4 in Creel, *Shen Pu-hai*, 347 and *Lüshi chunqiu* 17/1.1 in Knoblock and Riegel, trans., *The Annals of Lü Buwei*, 405.

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distinctions are far from sufficient: they are only effective if the ministers are convinced that the ruler will consistently judge and act upon the stipulated demands, rather than on personal whims, preferences or other subjective criteria. Consistent judgment is thus a third important step of the *zhengming* technique, broadly taken.[65]

Analogies from the crafts show that "names" in the form of clear titles or job descriptions are not merely used to gain knowledge and set standards but also in order to judge somebody's worth. The marking-cord, used to judge the usefulness of a piece of wood, is introduced in the field of personnel management: "If by stretching the marking-cord he carves, then 'skillful' and 'clumsy' pieces of wood can easily be distinguished. Well, for the examination of ministers, there is also a marking-cord. 陳繩而斲之，則巧拙易知也。夫觀群臣亦有繩" (6:7/7). Interestingly, the metaphoric flow is also reversed, as the objects of the craftsman are described in terms of statecraft:

> Thus, by stretching the marking-cord, will the crooked pieces of wood be found guilty; when applying a water-level, will uneven ground be found guilty; through a close examination of job descriptions, will the careless ministers be found guilty.
> 故陳繩，則木之枉者有罪；措准，則地之險者有罪。審名分，則臣之不審者有罪。(6:6/12–13)

The danger of the ruler being obscured or blinded is not merely a matter of not seeing correctly, nor even of being ill-informed about some possible eventuality. That is not the author's major concern.

> The enlightened ruler does not use far-reaching eyes and ears, nor does he send out spies, nor does he make special efforts to hear and see. But when a situation comes up, he investigates it, when information is brought up, he listens to it, and when some affair occurs, he responds.
> 明君不用長耳目，不行間謀，不強聞見。形至而觀，聲至而聽，事至而應。(6:6/21–22)

The important thing is to evaluate and react correctly and consistently when some problem is brought up at court. If *zhengming* works well, no spies are needed.

In personnel management—a crucial part of the political process—the ruler should judge his ministers' behavior in terms of whether or not "it is this" (*shi* 是), or "it is not this" (*fei* 非), compared to what was expected or demanded from them.

> What is "this" and "not this" can be distinguished because the terms (of the job description) are being fixed. Going beyond its fulfillment, is a fault. Not being up to it, is incompetence.
> 是非之可辨，名定也。夫[66]過其實，罪也。弗及，愚也。(6:6/5)

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[65] This step in the ruling technique as *zhengming* is explicitly labeled in just one passage: "If he does not see totally clearly in what is well done or badly done, he is to be called 'blinded.' If he sees it but is unable to recognize it, he is to be called 'hollow.' If he recognizes it but is unable to reward and punish them, he is to be called 'unresolved.' These three are the source of chaos. If he has a clear view of allotments, he is not blinded. ***If he uses names correctly, he is not hollow.*** If he rewards the persons of worth and punishes the evil ones, he is not unresolved. 是非不得盡見，謂之蔽。見而弗能知，謂之虛。知而弗能賞(當)罰之，謂之縱。三者亂之本也。明分則不蔽。正名則不虛。賞賢罰暴則不縱" (6:7/3–5).

[66] Wang Jipei suggests this character, as an emendation of 無.

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Shi and *fei* thus also stand, more broadly, for the confirmation of a job well done and the rejection of a badly done job. "Failure in this judgment is what one calls being 'blinded.' 是非不得盡見, 謂之蔽" (6:7/3). *Zhengming* is thus not only a momentary act of correct naming when appointing somebody for a job, but also a daily endeavor of judging the concrete fruits of the ministers' labor: "Judgments in terms of 'well done' or 'badly done' follow the correspondence between the stipulated terms and the realizations. 是非隨名實" (6:6/17). This immediate follow-up keeps the general demands of a position vivid and concrete in determining each particular task.

However, attaining certainty about consistent judgments based on clear criteria is not only the concern of the ruler, but also of officials at every echelon of the political hierarchy. But this fact only interests Shizi insofar as it benefits the ruler, to whom his advice is directed. The major advantage of consistent judgment according to clear criteria is that the road to success is plain. Hence, ministers will keep aloof of intrigue or conspiracy, and devote all their energy to their jobs. "Therefore, exhausting their true feelings, they do not give in to deceit. Retaining a simple disposition, they do not become artful. 是故情盡而不偽，質素而無巧" (6:6/5; see also 5:5/5).

2.6. To reward and punish accordingly

Of course, the ruler's consistent judgment will only be effective if it is actually followed by one last step: "Rewards and punishments follow his judgments about a task being well done or not: if well done, there is a reward; if not, there is punishment. 賞罰隨是非：是則有賞，非則有罰" (6:6/18). If a ruler "recognizes it but is unable to reward and punish them, he is to be called 'unresolved'.... If he rewards the persons of worth and punishes the evil ones, then he is not unresolved. 知而弗能賞(罰)[67] 謂之縱[...] 賞賢罰暴則不縱" (6:7/3–4). Apparently, rewards and punishments were also stipulated in the job descriptions: "If rewards and punishments follow the descriptions, everyone among the people will be respectful. 賞罰隨名，民莫不敬" (5:5/6).

Appropriate action towards ministers is part and parcel of a good ruler's general attitude towards his people, which is one of kindness and care. But Shizi's attention always turns to the specific case of candidates for service.

> Well, to care for the people is also to benefit them. Care without benefit is not the virtue proper to a loving mother. To be fond of officials is also to recognize them. With fondness but without recognition, they will not be of any use to him, even though there are many of them. 夫愛民 且利之也。愛而不利，則非慈母之德也。好士且知之也。好而弗知，則眾而無用也。(6:6/15–16)

The author's most specific *zhengming* instructions concern this fourth step: the policies of appropriate action. Exemplary forms of reward and punishment are promotion and demotion: cheap for the ruler and much coveted by ministers, as Herrlee Creel once remarked.[68]

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[67] Following Zhang Zhichun in adding 罰, as in the line below. See Shui Weisong, ed., *Shizi duben*, 76, note 11.

[68] Herrlee Creel, *Shen Pu-hai*, 110: "After all, these cost nothing, and may return much in loyalty and service."

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> If among the ministers someone is of high worth, promote him; if inadequate, demote him. If he brings about order, engage him; if not, dismiss him. If he is loyal, take care of him; if not, find fault with him.
> 於群臣之中，賢則貴之，不肖則賤之： 治則使之，不治則(廢)[69]之： 忠則愛之，不忠則罪之。(6:7/5–6)

Shizi elaborates on what he considers the most crucial sphere of *zhengming*, namely making use of persons of worth. In that respect, the ministers' most crucial task is to advance such persons. In order to make ministers fully accountable for their protégés, rewards and punishments should be consistent and convincing so that they overrule any other possible benefit or harm that one could meet by appointing friends and relatives to a valued position.

> The way the ruler holds his court is to make everyone have his allotted task. If there is somebody good, the ruler makes sure to ask who among them advanced him. If there is somebody making blunders, he makes sure to ask who among them put him in charge. He then performs rewards and punishments on them and thereby gets a good view of who is worthy and who is not. Imagine that there is somebody very good, but the ruler fails to ask who advanced him, or that there is somebody making big blunders, but he fails to ask who put him in charge, then the allotment of tasks does not serve any purpose. If he asks who put him in charge but fails to perform rewards or punishments, then his asking does not serve any purpose.
> 聽朝之道使人有分。有大善者必問其孰進之。有大過者必問其孰任之，而行賞罰焉，且以觀賢不肖也。今有大善者不問孰進之，有大過者不問孰任之，則有分無益已。問孰任之而不行賞罰，則問之無益已。(6:6/26–7/3)

Shizi knows full well that it is not always easy to advance good candidates. One danger seems to be that the ruler does not have exclusive power to respond. Others might punish you or your offspring for advancing a particular candidate, even after your or the candidate's death or demission of power. Ministers will therefore also seek protection elsewhere, unless they are absolutely sure of the ruler's efficient protection. Hence, Shizi's advice: "If you protect the descendents of people who in their appointment of officials advance men of worth, then the people will become very careful in matters of promotion. 任士進賢者，保其後則民慎舉" (6:6/8).

But more difficult than the wrath of others are the minister's self-esteem and self-protection. Admitting to oneself as well as to one's ruler that somebody else is better for a certain job, is very difficult, not only psychologically, but also because of the position that one risks to loose. This fact, known as the "law of Parkinson," is not limited to politics or to the ancient Chinese context. And Shizi's own meritocratic policy, in which talented servants are promoted and less adequate ones demoted, further dissuades ministers from honestly advancing their own rivals. But Shizi tries to solve this dilemma with further instructions:

> The person who acts as minister, considers advancing men of worth as his achievement. The person who acts as ruler, considers using men of worth as his achievement....For a minister to advance men of worth, this should amount to placing himself on the same high level. If no reward is given to one who thus places himself on the same high level that is a reason for him not to do it. For a

[69] Following Zhang Zhichun in adding this missing character. See Shui Weisong, ed., *Shizi duben*, 76, note 12.

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> minister to advance inadequate candidates, this should amount to placing himself on the same low level. If no punishment is executed on one who places himself on the same low level, this is a reason for him to do that. If you make sure that those who advance persons of worth receive rewards and that those who advance inadequate candidates get punished, no one will dare to advance men of little talent. And thus, they will more often than not advance men of worth.
> 為人臣者以進賢為功；為人君者以用賢為功[...]為人臣者進賢，是自為置上也。自為置上而無賞，是故不為也。進不肖者，是自為置下也。自為置下而無罪，是故為之也。使進賢者必有賞，進不肖者必有罪。無敢進也者為無能之人。若此，則多進賢矣。(6:7/9–12)

With this advice, the two chapters on *zhengming* in the *Shizi*, "Fen" and "Fa meng," come to an end.

2.7. Naming as a correction by the One Man

Aside from these four meanings of *zheng*, there is at least one more: it does not stress the correspondence of *ming* with something else, but the fact that naming happens from a certain position and, hence, with a certain attitude. In order to "name correctly" or to "correct names", the ruler has to correct himself,[70] to occupy his central position correctly:

> When the enlightened ruler stands, he is correct: his appearance is dignified, his mind open, his looking undisturbed, his listening untroubled. Responding to propositions with careful attention for the allotment of jobs, he takes position in his courtyard.
> 明君之立也正，其貌莊，其心虛，其視不躁，其聽不淫，審分應辭以立於廷。(6:6/20)

The seemingly magical force of *zhengming* that we encounter in some of Shizi's statements, is mainly related to this last aspect of *zheng*, although there is no sharp line between *zhengming* as a political technique and its impact beyond the realm of what we consider politics. If the ruler acts correctly at the center, there will be no limits to his beneficial influence. "The sagely king corrects speech at the court and the four corners of the world become well ordered. 聖王正言於朝而四方治矣" (5:5/23–24). And, "if one is capable of using names correctly, heaven's operations will be completed and the earth will be at peace. 苟能正名天成地平" (6:7/9).

Shizi's elaboration of *zhengming* combines a bureaucratic technique with a belief in the ritual power of words. However miraculous the workings of rituals seem to be, there are strict conditions for their success: something wonderful comes about for a certain community when the right person pronounces the correct words with the appropriate attitude and at the right place and time.[71] For Shizi, the right place is the center of a network, where one man holds on to the One: "Pay attention to the principle of the One and all affairs will succeed; pay attention to the guideline of

[70] See also chapter 13: "As the sage makes himself correct, all regions in the four directions are ordered....To administer is to correct others. If one's person is not correct, others will not follow. 聖人正己而四方治矣[...]政也者，正人者也；身不正則人不從" (13:11/19–20).

[71] It has been suggested that the commonly known expression among Catholics: "*Hoc est corpus meum*" (This is my body), used during the celebration of the Eucharist, is the source of the expression "hocus pocus".

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the One and all affairs will be in order. 審一之經，百事乃成. 審一之記，百事乃理 (6:6/17)." An important characteristic of this position is its uniqueness. Like the analogy with land-tilling (6:6/10–12), the implicit image of a political pole star[72] stresses the distinction between the central figure holding on to the One and the periphery that depends on him. To judge the behavior on the basis of the job descriptions and to reward or punish accordingly, "these are matters that the ruler determines alone. 人君之所獨斷也" (6:6/18). Although he needs information and advice from as many others as possible, he alone is fully informed and makes the final decisions.

The power of this central position is a two edged sword, since minor acts or attitudes can bring about major events throughout the empire. On the one hand, power demands from the ruler a constant alertness and careful attention, so that he can see and remedy any deceit or danger as soon as its first signs appear. The One man always has to determine immediately which attitude is correct: caring and benefiting the people (6:6/15) but also being strict and awesome (5:5/25). The adoption of a correct attitude, also during banquets, goes far beyond the mere application of a bureaucratic mechanism that checks names against realizations. On the other hand, the central position makes the ruler's task easy, allowing great deeds to follow from minor interventions. He dexterously pulls the strings at the center of the network, like a charioteer skillfully driving his team of horses (5:5/25–26 and 6:6/3–4). "By holding on to the One, he remains in quietude, making names correct themselves and tasks settle themselves. 執一以靜，令名自正，令事自定" (5:5/5–6). Seated in his court, he orders with few words, while a whole bureaucratic network unrolls from his control over the most important ministers, who, in turn, control others. The certainty of his consistent response alone is enough to make people obedient, so that the ruler is "held in awe without even resorting to actual punishments 不罰而威" (5:5/25).

This last aspect of *zhengming* thus stresses the distinction between the ruler and those ruled by him. There is a fascination with the person holding on to the One, his correspondingly careful attitude, and the miraculous results that can be reaped from it within and beyond the realm of politics: "By holding on to the Way of the One, the ruler gets rid of cleverness and tricks. 執一之道，去智與巧" (5:5/12); and "*Zhengming* does away with deceit, so that all tasks are fulfilled as in a transformation. 正名去偽，事成若化" (5:5/24; 6:7/9).[73] Compared with such statements, the correspondence of "names" with something else (capacities, behavior, other names, acts...) is largely presented as ontologically unproblematic, as a bureaucratic concern for the ruler. The *Shizi* thus confirms Hans-Georg Moeller's claim "that the primary difference which shapes ancient Chinese discourse concerning the linguis-

[72] This celestial image of a pole star ordering an orderly rotating sky is more explicit in other texts, such as the *Heguanzi*. See Defoort, *The Pheasant Cap Master*, 188–93.

[73] Chapter 2 describes "transformation" as the sort of perfect and inscrutable change that "heaven and earth bring about when things grow without anybody seeing how they make them grow, and when things die without anybody seeing how they make them die. The sage also works like that: when he strenghtens the sources of happiness, happiness increases without anybody noticing how he does it; when he removes the causes of calamity, it is removed without anybody knowing being aware of it. Therefore he is called a 'divine person'. 天地之道，莫見其所以長物而物長；莫見其所以亡物而物亡。聖人之道亦然：其興福也，人莫見而福興矣；其除禍也，人莫見而禍除矣。故曰神人" (2:3/19–20).

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tic sphere is not actually any difference between name/form or name/actuality or claim/achievement, but the difference between the ruling realm of non-language and the subjugated reality of the languaged."[74] As we saw in the various steps of *zhengming*, the ruler—being the nexus around which the bureaucratic network revolves—is responsible for forging or restoring connections between tasks and persons, between behavior and judgments, or between judgments and rewards. He is the "one" where opposites meet: "While names and realizations can be distinguished as two things, when they are joined, they form one. 名實判為兩，合為一" (6:6/17). From that central position, *zheng* does not mean correspondence with a norm, but a subtle and powerful "correct" and "correcting" act of constant adjustment between names and something else by the unique and most central person. [75]

Moeller argues that current *zhengming* research is distorted by a Western philosophical fascination with the relation between language and reality, which is not as prevalent in ancient Chinese texts.[76] There are such concerns in the *Shizi*, but they come in various forms—job description/capacities, behavior/judgment, and judgment/rewards—and they do not dominate the *zhengming* discourse. The extraordinary power of *zhengming* comes mainly from the power of a unique and central position, where one unnamed ruler is surrounded by all those named by him. Another distortion of the Chinese *zhengming* theory is, I believe,[77] the dominance of the "praise and blame" tradition which places the power of names in the hands of historiographers, who give expression to their evaluation of political events through their subtle choice of words. In the *Shizi*, as in various other texts, the ruler alone has the power of "names" and he decides on their correspondence with other things.

Although the current *Shizi* is a problematic text and the dates of its various parts have not been determined, there are no strong arguments to date its core later than the third (or perhaps second) century B.C. Chapters 5 and 6 of the *Shizi* contain a rich and relatively coherent testimony of early views on *zhengming* as a central technique in government, especially in the search for the best candidates for office at court.

[74] Hans-Georg Moeller, "Chinese Language Philosophy and Correlativism," *Bulletin of the Museum of Far Eastern Antiquities* 72 (2000), 98. See also Carine Defoort, *The Pheasant Cap Master*, 203–208.

[75] One line suggests that job descriptions are also adjusted to the realizations: "If on the basis of realizations, he checks the names, all tasks will be performed well. 以實覈名 百事皆成" (5:5/24). Some editions, however, including the *Qunshu zhiyao*, have the character *fu* 覆 'cover' instead of 覈.

[76] This is suggested by Hans-Georg Moeller, "Chinese Language Philosophy and Correlativism": 92–94, 98.

[77] See Carine Defoort, "Some Reflections on *Zhengming* Scholarship: The Correct Use of Names" (paper presented at the EACS meeting in Moscow, August 2002).

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Editor's Afterword:

Natural resources, and their exploitation

by

Magnus Fiskesjö

On November 27, 2002, the *Bulletin of the Museum of Far Eastern Antiquities* celebrated the publication of volume seventy-two, the thematic issue "Reconsidering the Correlative Cosmology of Early China." At a special reception-gathering with invited guests, students, scholars, and members of the museum's staff promoting our journal, heard an invited lecture for the happy occasion presented by Professor Carine Defoort of the Katholieke Universiteit Leuven, Belgium. In her lecture, entitled "Ruling the world with words: The Idea of *Zhengming* 正名 in the *Shizi* 尸子, " Professor Defoort (a member of the journal's editorial advisory board), analyzed the use of *zhengming* in this early Chinese text which may ultimately derive from pre-Han times. The contested, pregnant term of *zhengming*, famous in the sense of "correcting the names" and supposedly a favorite with the philosophers of ancient China as a ruler's tool with which to rule the world, is scrutinized by Defoort with the philosopher's acute awareness of the presence of multiple possibilities that are concealed in its use context. It was a most inspiring lecture, which provoked a flurry of responses from the audience and a discussion where the museum lecture hall reverberated with the hidden meanings and contemporary echos of this ancient text. We are happy to be able to include Professor Defoort's text in this issue of the *BMFEA*.

The *BMFEA* will continue to present both general and thematic issues, with the aim of provoking new debates, and serving as an international site of scholarly cross-fertilization. "Correlative cosmology" is one topic brought up for critical re-examination; so is the interdigitation of the spoken and the written (so often reduced to simplistic and uncomplicated dichotomies such as speech vs. text) which is the focus of the forthcoming volume 74, called "Inscription—Orality." The general issues where no special theme is declared beyond the overall aims of the journal will continue to present articles by scholars worldwide, on all aspects of ancient and classical East Asia and adjacent regions, including archaeology, art, and architecture; history and philosophy; literature and linguistics; and related fields. We wish to underline that contributions seriously engaging contemporary critical thought in the huma-

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nities and social sciences are especially welcome. The spirit of "Dialogue—not diatribe," certainly also means that critical responses to the published articles are most welcome. There are noteworthy precedents for this in the previous pages of the *BMFEA*, such as, for example, the Bernhard Karlgren-Eduard Erkes exchange in vol. 2 (1930), and 3 (1931).

The present issue, *BMFEA* 73, brings together four articles which despite the absence of a previously declared theme nevertheless are held together by a common thread: the analysis of the exploitation of natural resources for human purposes.

In the first article, Liu Li and Chen Xingcan launch a timely new exploration of the ways in which naturally occurring resources such as metals and salt were used in the emerging early state societies in what is now northern China. My own article explores a related theme, the Shang dynasty's use of the wild (animals) in contradistinction to the domestic; and Philippe Fôret's article examines a "Chinese Antarctica," that is, the appropriation on Chinese terms of the continent of ice and rocks, among the last terrestrial parts of earth penetrated and colonized by humans.

The apparent strangeness of a "Chinese Antarctica" is actually a very suitable starting point for the identification of the common thread which runs through these pieces. Whenever that which we call natural resources (rocks, ice, copper ore, honey or flowers, as the case may be) are brought into the purview of human interest, they no longer remain simply "natural." Inevitably, as if touched by a magic wand, they have been brought into "culture," that strange dimension of symbolic meanings in which every silent rock is assigned its place in the game of intra-human communication. This new existence is, strictly speaking, not related to its own life, and also set apart from its existence as whatever kind of direct-instrumental "resource" of wood, sap, as part of a hunting ground, or the like. The magnitude of this leap into the world of human symbols can never be overestimated. I do not mean this as anthropocentric aggrandizement exaggerating our species' stature in nature, or as an artificial divorce of nature and culture, itself a onesided human invention. (I also don't mean this word of caution as a mere bow to biopolitical correctness).

On the contrary, I wish to suggest that these three articles taken together contribute in important ways to an inquiry into what we might call the *cultural presence* of so-called "natural resources." Their presence in cultural life is directly related to the "ruling of the world by words" which preoccupied many ancient Chinese philosophers, as well as not a few latter-day philosophers. This "ruling" in fact involves and presupposes a continuous creation and re-creation of our world, in which "natural resources" are really inseparable from the human communicative framework. From this perspective, the "Chinese Antarctica" is really a wondrous example of the range of symbolic games that humans play with themselves, deploying bits and pieces of nature as the pawns of their own game. In this case, huge tracts of an uninhabitable icy continent are adopted into the Chinese national cultural framework, assigning Chinese traditional names to the ice, and also drawing it into the larger symbolic game played by the world nations competing over it.

This sort of symbolic game is essential to any "control," or manipulation, of the "resources" that humans use—including such resources as the copper we mine, the tigers we hunt, or the Antarctic ice in which we plant our flag. These are natures' building blocks, co-existing with us on the planet and drawn by us into our project

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of building and rebuilding our world by systematically assigning meanings and thus both making and ruling the world by words.

The "words" used to create and rule the world obviously always will be organized according to culturally specific traditions and histories, as in the "Chinese" cases that are examined in this issue. Moreover, the "world" they create is also invariably social, and thus often unequal, sometimes even hierarchical. This too has preoccupied many thinkers (it is, of course, the next major aspect involved in the "ruling of the world with words").

As an example, let us consider the social position of water in the world of Bali, discussed by many scholars and notably by J. Stephen Lansing.[1] Quintessentially "natural" as a resource (even paradigmatically offering itself as the linguistic raw material of the very word "source"!), in Bali, water flows throughout every sphere, whether natural or socio-cultural. Water is deployed instrumentally, in irrigation, and in famously all-encompassing rituals of holy water conducted through a sophisticated water-temple system which manages the flow of water to rice fields. Without it, society could not possibly be sustained, ecologically or demographically. Bali water, and its holiness, helps us pinpoint certain fundamental problems in the "economistic" understanding of the appropritation and exploitation of natural resources which permeates much of the literature.

The Balinese holy water could and has been explained from a Marxian viewpoint, as a mystification of human labor which also serves to conceal power structures and social inequality. On the surface, the Balinese "religion" of water appears detached both from social hierarchy and from kingship, and is organized by a sort of "hydraulic solidarity."[2] Even so, it would seem that the general Marxian ideas of alienation of human labor and of "humanized nature" (the human-produced objectified labor by which humankind produces itself), could find no better illustration than this managed flow of water within the human-scaped irrigated mountains of Bali. The picture fits the Marxian notion of "humanized nature:" the refashioning, through labor, of nature into tools and supplies for our sustenance and into a stage raised up above nature, on which human social life then unfolds.[3] As for alienation, the water indeed seems to be fetishized as an alien power. The farmers who built the entire system of irrigation devices actively suppress the recognition that this was built by them, just as the bronze vessels cast by the craftsmen of the Shang foundries might be alienated as magical powers begin to dwell in those vessels, or as a worker might become alienated from the commodity in which he has invested his labor.

But water as a holy medium and symbolic reference organizing social relations and activities actually also leaves these notions behind as it reaches, pervasively, far

[1] J. Stephen Lansing, *Priests and Programmers: Technologies of Power in the Engineered Landscape of Bali* (Princeton: Princeton University Press, 1991).

[2] As in J. Stephen Lansing's felicitous phrase (*Priests and Programmers*, 52 ff.). Lansing's remarkable study intentionally complicates, to the point of inundating it, the famous "Oriental Despotism" based on hydraulic control, as proposed by Marx, Wittfogel, and others (see Lansing, 11 ff.). The kings of Bali may well have respected the relative autonomy of the water religion precisely because the water and its form of management embodies one major precondition of kingship, with which it must live in symbiosis (cf. Valerio Valeri's "Afterword," in J. Stephen Lansing, *Priests and Programmers*, 134–43, esp. p. 139).

[3] On the point of nature's passivity, one can compare the Balinese conception of an interdependence between us and a "nature" that is actively and perpetually productive in its own right (which is how we might, with Lansing, understand the Balinese view).

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beyond the immediate use value that the water has as a medium for the control of the irrigated agricultural fields, i.e. as holy water. Actually, the Balinese example of play on a "natural resource" more than anything highlights our use of such resources as integrated signs of communication organizing whole spheres of human life and activities. It is not simply that the instrumental and the symbolic are closely intertwined to the point of being inseparable (as in all human activities, since several millions years back), but that the water is used in cultural praxis as a medium of communication—*Homo loquens* in action. Marx's view of labor's alienation today appears much too narrowly focused on our ant-like labors and ignored our formidable capacity for symbolic play. With Valerio Valeri we may consider this Marx' own Romantic search for an essential "human nature" in the course of which he simply stared himself blind at *Homo faber's* labor and forgot our species' identity as the eloquent being that can draw even water, in Bali, and ice and rocks, as in Chinese Antarctica, into the flow of human interaction and give them new roles as communicative devices. Also, it is precisely in how the Marxian version of industrialist developmentalism strategically overlooks the immense importance of communication in the continuous re-creation of humanity that these Marxian ideas reveal themselves as a subspecies of a broader field of misunderstanding of the human condition.[4]

In the archaeology of ancient China, a prominent topic in this issue of the *BMFEA*, the legacy of this onesidedness shows already on the pages of the table of contents as they appear in almost every standard Chinese presentation of archaeological data to date. There, "natural resources" are almost invariably listed either as foot-noted afterthoughts or as preconditions conceptualised as separate from culture (such as "The Environment," etc.). In both cases, this reflects and/or coincides with a simplistic Marxian instrumentalist view of these natural resources as nothing more than the silent raw material of nature. They are almost never, not even potentially, regarded in, or as, terms of contemporaneous conceptions fashioned and deployed to fuel, govern, structure or even make possible social life of the period under study; or in terms of their use as symbols by which we live.[5] Alternatively, we should try to understand them in the manner that we would adopt if we were to approach the island of Bali in order to build a general theory of holy water. This, I submit, would be a suitable starting-point from which to consider and appreciate the four articles in this issue, whether they deal with symbolic games played with names, or with natural resources like the salt, metal ore, or other geologic secretions discussed here; with fellow mammals such as tigers, buffalo and deer; or, with the Sinicization of the icy continent of Antarctica.

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[4] See Valerio Valeri's "Afterword," in J. Stephen Lansing, *Priests and Programmers*, 134–43; p. 139; on Marx, see too his article on "The fetish" (in *Fragments from Forests and Libraries: A Collection of Essays by Valerio Valeri*. Durham, N.C.: Carolina Academic Press, 2001, 15–32).

[5] These patterns in the organization of archaeological data (the simplistic division into natural and cultural, or, for that matter, religious and everyday, etc.) in themselves constitute interesting potential topics for further study. Ultimately, they must be explained not only by reference to Marxist concepts but in terms of the transfer onto the data (including their original production and selection) of the categories of present-day value systems (such as, for example, in the case of "art") privileging certain categories of material objects as signs of prestige, progress, etc.

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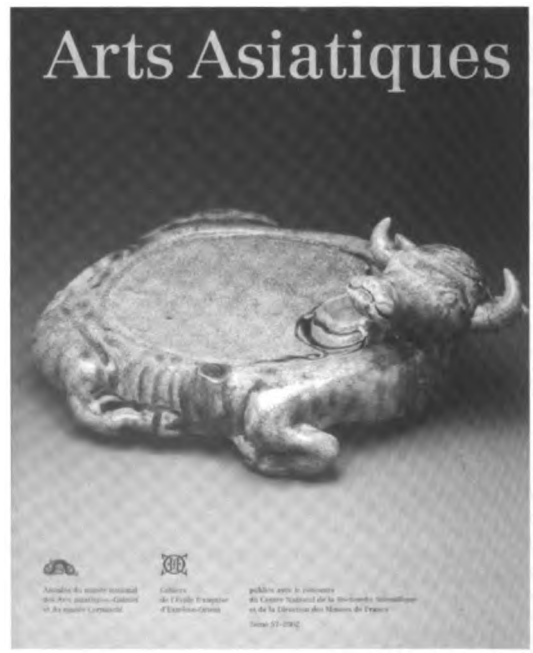

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The Bulletin of the Museum of Far Eastern Antiquities

first appeared in 1929, the same year as the Museum opened in Stockholm. The journal has been published annually by the Museum of Far Eastern Antiquities ever since. The founding editor was Johan Gunnar Andersson, founder of the Museum, and a professor of East Asian archaeology known for his pathbreaking discoveries in East Asian prehistory. Another former editor was the famous Sinologist Bernhard Karlgren, who published generously and voluminously in the Bulletin. Many other Swedish and international scholars have contributed to the *BMFEA*, and helped establish it as important international venue of publication in Asian studies.

The *BMFEA* invites original manuscripts from scholars worldwide on all aspects of ancient and classical East Asia and adjacent regions, including archaeology, art, and architecture; history and philosophy; literature and linguistics; and related fields.

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The previous *BMFEA* issue, volume 72 (2000), is the first special-theme issue of the journal, entitled "Reconsidering the Correlative Cosmology of Early China," which went on sale in the fall of 2002 and has attracted much attention and debate, which undoubtedly will continue. Some copies are still available for purchase.

The forthcoming issue, *BMFEA* 74 (2002), which is a special issue on "Inscription—Orality," is scheduled to appear in the fall of 2003.

A back list from 1929 onwards of all articles, issues and reprints for sale is available from the editorial office. *BMFEA* articles are not available in electronic version, but all printed items available can be purchased by mail or directly at the Museum Shop. We welcome e-mail enquiries, and credit cards are now accepted. The Bulletin can also be obtained from our agents, viz.

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